SHORT DESCRIPTION OF THE HUMAN MUSCLES,

CHIEFLY AS THEY APPEAR ON DISSECTION.

TOGETHER WITH

THEIR SEVERAL USES, AND THE SYNONYMA OF THE BEST AUTHORS.

By JOHN INNES.

A NEW EDITION,

Greatly improved by ALEX. MONRO, M. D.

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John Morrill.
1807.

TO

ALEXANDER MONRO, M.D.

PROFESSOR of ANATOMY and MEDICINE in the Univerſity of Edinburgh.

SIR,

HAVING been repeatedly ſolicited, for ſeveral years paſt, by many of your Pupils, to publiſh a ſhort Deſcription of the Muſcles, as they appear upon Diſſection of the Human Body, I have at laſt ventured to comply with their requeſt. Your anxiety to promote the Science of Anatomy, and to encourage every thing that may be uſeful to the Gentlemen who attend your Theatre, was the principal motive which induced me to undertake this taſk. I have no knowledge of the ſubject but what I derived from you. If, therefore, this Treatiſe, which you

have never ſeen till I now preſent it to you, ſhould communicate any advantage to the Gentlemen under your care, it is to you alone they are indebted for the obligation. I am,

SIR,

With reſpect,

Gratitude, and eſteem,

Your much obliged,

And very humble ſervant,

EDINBURGH, 1776. } JOHN INNES.

PRE-

PREFACE.

SEVERAL full and accurate deſcriptions of the Muſcles have already been publiſhed. But their ſize and prolixity have rendered them of leſs value to the diſſector than the ſmall treatiſe of Dr Douglas, which was firſt publiſhed about the beginning of this century, and, ſince that time, has undergone various impreſſions, without receiving any improvement, excepting the addition of the ſynonyma from Albinus. It is therefore preſumed, that a ſimple and conciſe deſcription of the muſcles, which ſhould contain all the improvements of the moderns, is ſtill wanting.

To claſs the muſcles according to their uſes, may do very well in a large work, or in deſcribing their compound actions: But this method can never anſwer the purpoſes of diſſection. To remedy this inconvenience, the muſcles in the

following treatiſe are deſcribed chiefly as they appear in diſſecting the human body.

The deſcribing of the muſcles according to their origins and inſertions prevents much circumlocution. This is the method purſued by Dr Douglas; and wherever his deſcriptions ſeemed tolerably accurate, they have been followed with little alteration. But Dr Douglas's book is peculiarly defective with regard to the muſcles of the abdomen, back, and neck: in deſcribing theſe, therefore, the method of Albinus has been preferred.

Those who have not opportunity, or are averſe from undergoing the labour of diſſecting, may derive conſiderable advantages from comparing the deſcriptions now given with the beautiful and correct tables of Albinus; and, to facilitate ſtill more the ſtudy of theſe intricate organs, I have cauſed to be publiſhed eight of Albinus's tables, with conciſe explanations, on a ſmall ſcale adapted for the pocket.

For the benefit of thoſe who wiſh to examine the hiſtory of the muſcles more minutely, the ſynony-

ſynonyma of the beſt authors are added; and, for the ſake of brevity, the compound action of the muſcles, and the origin and inſertion of ſeveral inconſiderable fibres, are omitted.

THE reader will obſerve, that, in general, the muſcles of one ſide only are deſcribed; becauſe all the muſcles of the body, with very few exceptions, have correſpondent ones on the oppoſite ſide.

A Short Account of the AUTHOR, and of his WRITINGS.

MR JOHN INNES, author of the following Treatiſe, was born at Callart, an obſcure village in the Highlands of Scotland. He came to Edinburgh at an early period of life, where he obtained the patronage and protection of Dr Alexander Monro, profeſſor of anatomy; who inſtructed him in the knowledge of the human body, and in the art of diſſection. When about the age of eighteen years, Dr Monro appointed him diſſector to the anatomical theatre. The functions of this important and difficult office he continued to perform with much reputation for near twenty years.

BUT his abilities were not confined to the dexterity of diſſecting the moſt minute parts of the human frame. He deſcribed the various organs with eaſe and with perſpicuity. This happy talent attracted the notice of the ſtudents; and, at their ſolicitation, and by the approbation of Dr Monro, he opened an evening-courſe of anatomical demonſtrations.

THE

THE number of pupils who annually attended theſe demonſtrations afforded the beſt evidence of his abilities, and of the advantages derived from his labours. During his laſt courſe, he was attended by near two hundred ſtudents.

FOR ſome time before his death, he was troubled with an affection of the lungs, which terminated in a phthiſis pulmonalis, and proved fatal to him on the 12th of January 1777.

ON the 15th of the ſame month, the following account of him appeared in the public papers:

"MR JOHN INNES, at an early period of life, had been educated in the diſſecting art: He made a rapid progreſs in his profeſſion; and his genius and induſtry were rewarded with the privilege of giving private lectures for his own emolument. The utility of his leſſons was ſoon perceived. Numbers of ſtudents reſorted to him for inſtruction; and all of them acknowledged the advantages they had received. At that ſtage of life when men are moſt capable of benefiting themſelves, and of being uſeful to the public, death hurried him out of the world.

world. He has given two ſmall ſpecimens of what was to be expected from his anatomical ſkill. The year before his death, he publiſhed a ſhort deſcription of the Human Muſcles as they appear on diſſection, together with their ſeveral uſes, and the ſynonyma of the beſt authors. The merit of this work was univerſally acknowledged. Some months after, he publiſhed, as a *vade mecum* for ſtudents, eight anatomical tables, containing the principal parts of the ſkeleton and muſcles repreſented in the large tables of Albinus, with accurate explanations. Theſe are all the monuments he has left by which the public is to judge of his ability. To his numerous friends and acquaintance, it is unneceſſary to mention the warmth of his heart, or the integrity of his diſpoſition."

ADVERTISEMENT.

DURING the illneſs of which Mr INNES died, he put into my hands the firſt edition of his Deſcription of the Muſcles, with a few, chiefly verbal, corrections of it.

ON peruſing that work lately, at the requeſt of the Bookſeller, I have found it neceſſary to make a very conſiderable number of alterations in what relates to the deſcription, as well as to the uſes, of the Muſcles.

EDIN. Sep. 5. 1777. } ALEX. MONRO.

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DESCRIPTION

OF THE

HUMAN MUSCLES.

CHAP. I.

MUSCLES *of the* TEGUMENTS *of the* CRANIUM.

THE ſkin that covers the cranium is moved by a ſingle broad digaſtric muſcle, and one ſmall pair.

1. OCCIPITO-FRONTALIS,

Ariſes fleſhy from the tranſverſe protuberant ridge near the middle of the os occipitis

cipitis laterally, where it joins with the temporal bone; and tendinous from the reſt of that ridge backwards, oppoſite to the lateral ſinus; it ariſes after the ſame manner on the other ſide: From thence it comes ſtraight forwards, by a broad thin tendon, which covers the upper part of the cranium at each ſide, as low down as the attollens aurem, to which it is connected, as alſo to the zygoma, and covers a part of the aponeuroſis of the temporal muſcle; when it comes as far forwards as near the hair of the front, it becomes fleſhy, and deſcends with ſtraight fibres.

Inſerted into the orbicularis palpebrarum of each ſide, and into the ſkin of the eye-brows, ſending down a fleſhy ſlip between them, as far as the compreſſor naris and levator labii ſuperioris alæque naſi.

Uſe. Pulls the ſkin of the head backwards; raiſes the eye-brows upwards; and, at the ſame time, it draws up and wrinkles the ſkin of the fore-head.

Epi

Epicranius, Albinus.
Frontalis et occipitalis, Winslow.

2. CORRUGATOR SUPERCILII,

Arises fleshy from the internal angular process of the os frontis, above the joining of the os nasi, and nasal process of the superior maxillary bone; from thence it runs outwards, and a little upwards.

Inserted into the inner and inferior fleshy part of the occipito-frontalis muscle, where it joins with the orbicularis palpebrarum, and extends outwards as far as the middle of the superciliary ridge.

Use. To draw the eye-brow of that side towards the other, and make it project over the inner canthus of the eye: When both act, they pull down the skin of the forehead, and make it wrinkle, particularly between the eye-brows.

Musculus supercilii, Winslow.
Musculus frontalis verus, seu Corrugator, Douglas.

CHAP. II.

Of the MUSCLES *of the* EAR.

THE muſcles of the ear may be divided into three claſſes, viz. the common, proper, and internal. The common may move the whole ear; the proper only affect the particular parts to which they are connected; and the internal, the ſmall bones within the tympanum.

The common muſcles are,

1. ATTOLLENS AUREM,

Ariſes thin, broad, and tendinous, from the tendon of the occipito-frontalis, from which it is almoſt inſeparable, where it covers the aponeuroſis of the temporal muſcle.

Inſerted into the upper part of the ear, oppoſite to the antihelix.

U

Uſe. To draw the ear upwards, and make the parts into which it is inſerted tenſe.

Superior auris, Winſlow.

2. ANTERIOR AURIS,

Ariſes thin and membranous near the poſterior part of the zygoma.

Inſerted into a ſmall eminence on the back of the helix, oppoſite to the concha.

Uſe. To draw this eminence a little forwards and upwards.

3. RETRAHENTES AURIS,

Ariſes, ſometimes by three, but always by two diſtinct ſmall muſcles, from the external and poſterior part of the root of the maſtoid proceſs, immediately above the inſertion of the ſterno-cleido maſtoid muſcle.

Inſerted into that part of the back of the ear which is oppoſite to the ſeptum that divides the ſcapha and concha.

Uſe. To draw the ear back, and ſtretch the concha.

Poſterior auris, Winſlow.

The proper muſcles are,

1. HELICIS MAJOR,

Ariſes from the upper and acute part of the helix anteriorly.

Inſerted into its cartilage a little above the tragus.

Uſe. To depreſs that part from which it ariſes a little downwards and forwards.

2. HELICIS MINOR,

Ariſes from the inferior and anterior part of the helix.

Inſerted into the crus of the helix, near the fiſſure in the cartilage oppoſite to the concha.

Uſe. To contract the fiſſure.

3. TRA

3. TRAGICUS,

Ariſes from the middle and outer part of the concha, at the root of the tragus, along which it runs.

Inſerted into the point of the tragus.

Uſe. Pulls the point of the tragus a little forwards.

4. ANTITRAGICUS.

Ariſes from the internal part of the cartilage that ſupports the antitragus; and, running upwards, is

Inſerted into the tip of the antitragus, as far as the inferior part of the antihelix, where there is a fiſſure in the cartilage.

Uſe. Turns the tip of the antitragus a little outwards, and depreſſes the extremity of the antihelix towards it.

5. TRANSVERSUS AURIS,

Ariſes from the prominent part of the concha on the dorſum of the ear; the fibres not ſo fleſhy as in the former.

Inſerted oppoſite to the outer ſide of the antihelix.

Uſe. Draws the parts to which it is connected towards each other, and ſtretches the ſcapha and concha.

The muſcles of the internal ear are three:

1. LAXATOR TYMPANI,

Ariſes by a ſmall beginning from the extremity of the ſpinous proceſs of the ſphenoid bone, behind the entry of the artery of the dura mater; then running backwards, and a little upwards, along with the nerve called *chorda tympani*, in a fiſſure of the os temporis near the foſſa that lodges the condyle of the lower jaw.

In-

Inſerted into the long proceſs of the malleus, within the tympanum, where it reſts upon the edge of the fiſſure between the pars ſquamoſa and petroſa.

Uſe. To draw the malleus obliquely forwards towards its origin, conſequently the membrana tympani, by which that membrane is made leſs concave, or is relaxed.

Externus mallei, Albinus.

Anterior mallei, Winſlow.

Obliquus auris, Douglas.

2. TENSOR TYMPANI,

Ariſes, by a very ſmall beginning, from the cartilaginous extremity of the Euſtachian tube, juſt where it begins to be covered by the pars petroſa, and ſpinous proceſs of the ſphenoid bone, near the entry of the artery of the dura mater; from thence running backwards near the oſſeous part of the Euſtachian tube, forms a very diſtinct fleſhy belly, below a thin oſſeous plate, between

and the pars ſquamoſa and labyrinth; and ſends off a ſlender tendon, which makes a turn into the tympanum along with the nerve called *chorda tympani*.

Inſerted into the poſterior part of the handle of the malleus, a little lower than the root of its long proceſs.

Uſe. To pull the malleus and membrana tympani inwards towards the pars petroſa, by which the membrane is made more concave and tenſe.

Internus mallei, Winſlow.

Internus auris, Douglas.

3. STAPEDIUS,

Ariſes, by a ſmall fleſhy belly, from a little cavern in the pars petroſa, near the cells of the maſtoid proceſs, before the inferior part of the paſſage for the portio dura of the auditory nerve; its tendon paſſes ſtraight through a ſmall round hole in the

ſame

ſame cavern, enters the anterior part of the tympanum, and is

Inſerted into the poſterior part of the head of the ſtapes.

Uſe. To draw the ſtapes obliquely upwards towards the cavern, by which the poſterior part of its baſe is moved inwards, and the anterior part outwards.

Muſculus ſtapedis, Winſlow.

Stapidæus, Douglas.

CHAP. III.

Of the MUSCLES *of the* EYE-LIDS.

THE palpebræ, or eye-lids, have one muſcle common to both, and the upper eye-lid one proper to itſelf.

1. ORBICULARIS PALPEBRARUM.

Ariſes, by a number of fleſhy fibres, from the outer edge of the orbitar proceſs of the ſuperior maxillary bone, and from a tendon near the inner angle of the eye: theſe run a little downwards, then outwards, over the upper part of the cheek, below the orbit, covering the under eye-lid, and ſurround the external angle, being looſely connected only to the ſkin and fat; run over the ſuperciliary ridge of the os frontis, towards the inner canthus, where they intermix

termix with thoſe of the occipito-frontalis and corrugator ſupercilii; then covering the upper eye-lid, deſcend to the inner angle oppoſite to the inferior origin of this muſcle, firmly adhering to the internal angular proceſs of the os frontis, and to the ſhort round tendon which ſerves to fix the palpebræ and muſcular fibres ariſing from it.

Inſerted, by the ſhort round tendon, into the naſal proceſs of the ſuperior maxillary bone, covering the anterior and upper part of the lachrymal ſac; which tendon can be eaſily felt at the inner canthus of the eye.

Uſe. To ſhut the eye, by drawing both lids cloſe together, the fibres contracting from the outer angle towards the inner, preſs the eye-ball, ſqueeze the lachrymal gland, and convey the tears towards the puncta lachrymalia.

The *ciliaris* of ſome authors is only a part of this muſcle covering the cartilages of the eye-lids, called *cilia* or *tarſi*.

There

There is often a ſmall fleſhy ſlip which runs down from the outer and inferior part of this muſcle above the zygomaticus minor, and joins with the levator labii ſuperioris alæque naſi.

2. LEVATOR PALPEBRÆ SUPERIORIS.

Ariſes from the upper part of the foramen opticum of the ſphenoid bone, through which the optic nerve paſſes, above the levator oculi, near the trochlearis muſcle.

Inſerted, by a broad thin tendon, into the cartilage that ſupports the upper eye-lid, named *tarſus*.

Uſe. To open the eye, by drawing the eye-lid upwards; which it does completely, by being fixed to the tarſus, pulling it below the eye-brow, and within the orbit.

Aperiens palpebram rectus, Douglas.

CHAP. IV.

MUSCLES *of the* EYE-BALL.

THE muſcles which move the globe of the eye are ſix, viz.

Four *ſtraight* and two *oblique*.

The four ſtraight muſcles very much reſemble each other; all

Ariſing, by a narrow beginning, a little tendinous and fleſhy, from the bottom of the orbit around the foramen opticum of the ſphenoid bone, where the optic nerve enters, ſo that they may be taken out adhering to this nerve; and all having ſtrong fleſhy bellies.

Inſerted at the fore-part of the globe of the eye into the anterior part of the tunica ſclerotica, and under the tunica adnata, at oppoſite ſides, which indicates both their names and *Uſe*; ſo that they ſcarcely require

quire any further deſcription, but to name them ſingly.

1. LEVATOR OCULI,

Ariſes from the upper part of the foramen opticum of the ſphenoid bone, below the levator palpebræ ſuperioris; and runs forwards to be

Inſerted into the ſuperior and fore-part of the tunica ſclerotica, by a broad thin tendon.

Uſe. To raiſe up the globe of the eye.

Atollens, Albinus.

Elevator, Douglas.

2. DEPRESSOR OCULI,

Ariſes from the inferior part of the foramen opticum.

Inſerted oppoſite to the former.

Uſe. To pull the globe of the eye down.

Deprimens, Albinus.

3. A D-

3. ADDUCTOR OCULI,

Ariſes, as the former, between the obliquus ſuperior and depreſſor, being, from its ſituation, the ſhorteſt.

Inſerted oppoſite to the inner angle.

Uſe. To turn the eye towards the noſe.

4. ABDUCTOR OCULI,

Ariſes from the bony partition between the foramen opticum and lacerum, being the longeſt from its ſituation; and is

Inſerted into the globe oppoſite to the outer canthus.

Uſe. To move the globe outwards.

The oblique muſcles are two:

1. OBLIQUUS SUPERIOR, SEU TROCHLEARIS,

Ariſes, like the ſtraight muſcles, from the edge

edge of the foramen opticum at the bottom of the orbit, between the levator and adductor oculi; from thence runs ſtraight along the pars plana of the ethmoid bone to the upper part of the orbit, where a cartilaginous trochlea is fixed to the inſide of the internal angular proceſs of the os frontis, through which its tendon paſſes, and runs a little downwards and outwards, incloſed in a looſe membranous ſheath.

Inſerted, by a broad thin tendon, into the tunica ſclerotica, about half-way between the inſertion of the attollens oculi and optic nerve.

Uſe. To roll the globe of the eye, and to turn the pupil downwards and outwards, ſo that the upper ſide of the globe is turned inwards, and the inferior part to the outſide of the orbit, and the whole globe drawn forwards towards the inner canthus.

Obliquus major, Winſlow.

OB-

2. OBLIQUUS INFERIOR,

Ariſes, by a narrow beginning, from the outer edge of the orbitar proceſs of the ſuperior maxillary bone, near its junćture with the os unguis; and, running obliquely outwards, is

Inſerted into the ſclerotica, in the ſpace between the abductor and optic nerve, by a broad thin tendon.

Uſe. To draw the globe of the eye forwards, inwards, and downwards; and, contrary to the ſuperior, to turn the pupil upwards, towards the inner extremity of the eye-brow; at the ſame time, the external part of the globe is turned towards the inferior ſide, and the internal rolls towards the upper part.

Obliquus minor, Winſlow.

CHAP. V.

Of the MUSCLE *of the* NOSE.

THERE is only one muſcle on each ſide that can be called proper to the noſe, though it is affected by ſeveral muſcles of the face.

COMPRESSOR NARIS,

Ariſes, by a narrow beginning, from the root of the ala naſi externally, where part of the levator labii ſuperioris alæque naſi is connected to it; it ſpreads into a number of thin diſgregated fibres, which run up along the cartilage in an oblique manner, towards the dorſum of the noſe, where it joins with its fellow, and is

Inſerted ſlightly into the anterior extremity of the os naſi and naſal proceſs of the ſuperior maxillary bone, where it meets with

with ſome of the fibres deſcending from the occipito-frontalis muſcle.

Uſe. To compreſs the ala towards the ſeptum naſi, particularly when we want to ſmell acutely; but, if the fibres of the frontal muſcle which adhere to it act, the upper part of this thin muſcle aſſiſts to pull the ala outwards. It alſo corrugates the ſkin of the noſe, and aſſiſts in expreſſing certain paſſions.

Rinæus, vel naſalis, Douglas.

CHAP.

CHAP. VI.

MUSCLES *of the* MOUTH *and* LIPS.

THE mouth has nine pair of muſcles, which are inſerted into the lips, and a common one formed by the termination of theſe, viz. three *above*, three *below*, three *outwards*, and the common muſcle ſurrounds the mouth.

The three above are,

1. LEVATOR ANGULI ORIS,

Ariſes, thin and fleſhy, from the hollow of the ſuperior maxillary bone, between the root of the ſocket of the firſt dens molaris and the foramen infra-orbitarium.

Inſerted into the angle of the mouth and under-lip, where it joins with its antagoniſt.

Uſe. To draw the corner of the mouth up-

upwards, and make that part of the cheek oppoſite to the chin prominent, as in ſmiling.

Elevator labiorum communis, Douglas.

Caninus, Winſlow.

2. LEVATOR LABII SUPERIORIS ALÆQUE NASI,

Ariſes by two diſtinct origins; the firſt broad and fleſhy, from the external part of the orbitar proceſs of the ſuperior maxillary bone which forms the lower part of the orbit, immediately above the foramen infra orbitarium; the ſecond portion ariſes from the naſal proceſs of the ſuperior maxillary bone, where it joins the os frontis at the inner canthus, deſcending along the edge of the groove for the lachrymal ſac. The firſt and ſhorteſt portion is

Inſerted into the upper lip and orbicularis labiorum; the ſecond and longeſt, into the upper lip and outer part of the ala naſi.

Uſe. To raiſe the upper lip towards the or-

orbit, and a little outwards; the ſecond portion ſerves to draw the ſkin of the noſe upwards and outwards, by which the noſtril is dilated.

Elevator labii ſuperioris proprius, Douglas.
Inciſivus lateralis, Firſt portion; *Pyramidalis*, Second portion; Winſlow.

3. DEPRESSOR LABII SUPERIORIS ALÆQUE NASI,

Ariſes, thin and fleſhy, from the os maxillare ſuperius, immediately above the joining of the gums with the two dentes inciſivi, and the dens caninus; from thence it runs up under part of the levator labii ſuperioris alæque naſi.

Inſerted into the upper lip and root of the ala naſi.

Uſe. To draw the upper lip and ala naſi downwards and backwards.

Depreſſor alæ naſi, Albinus.
Inciſivus medius, Winſlow.

De-

Depreſſor labii ſuperioris proprius, Douglas.

The three below are,

1. DEPRESSOR ANGULI ORIS,

Ariſes, broad and fleſhy, from the lower edge of the maxilla inferior, at the ſide of the chin, being firmly connected to that part of the platyſma myoides, which runs over the maxilla to the angle of the mouth, to the depreſſor labii inferioris within, and to the ſkin and fat without, gradually turning narrower; and is

Inſerted into the angle of the mouth, joining with the zygomaticus major and levator anguli oris.

Uſe. To pull down the corner of the mouth.

Triangularis, Winſlow.

Depreſſor labiorum communis, Douglas.

2. DEPRESSOR LABII INFERIORIS,

Ariſes, broad and fleſhy, intermixed with fat, from the inferior part of the lower jaw next the chin; runs obliquely upwards; and is

Inſerted into the edge of the under lip, extends along one half of the lip, and is loſt in its red part.

Uſe. To pull the under lip and the ſkin of the ſide of the chin downwards, and a little outwards.

Quadratus, Winſlow.

Depreſſor labii inferioris proprius, Douglas.

3. LEVATOR LABII INFERIORIS,

Ariſes, from the lower jaw, at the roots of the alveoli of two dentes inciſivi and of the caninus; is

Inſerted into the under-lip and ſkin of the chin.

Uſe.

Uſe. To pull the parts into which it is inſerted upwards.

Levator menti, Albinus.

Inciſivus inferior, Winſlow.

Elevator labii inferioris proprius, Douglas.

The three outward are,

1. BUCCINATOR,

Ariſes, tendinous and fleſhy, from the lower jaw, as far back as the laſt dens molaris and fore-part of the root of the coronoid proceſs; fleſhy from the upper jaw, between the laſt dens molaris and pterygoid proceſs of the ſphenoid bone; from the extremity of which it ariſes tendinous, being continued between both jaws to the conſtrictor pharyngis ſuperior, with which it joins; from thence proceeding with ſtraight fibres, and adhering cloſe to the membrane that lines the mouth, it is

Inſerted into the angle of the mouth within the orbicularis oris.

Uſe. To draw the angle of the mouth backwards and outwards, and to contract its cavity, by preſſing the cheek inwards, by which the food is thruſt between the teeth.

Retractor anguli oris, Albinus.

2. ZYGOMATICUS MAJOR,

Ariſes, fleſhy, from the os malæ, near the zygomatic ſuture.

Inſerted into the angle of the mouth, appearing to be loſt in the depreſſor anguli oris and orbicularis oris.

Uſe. To draw the corner of the mouth and under-lip towards the origin of the muſcle, and make the cheek prominent, as in laughing.

Zygomaticus, Douglas.

3. ZYGOMATICUS MINOR,

Ariſes from the upper prominent part of the os malæ, above the origin of the former

mer muſcle; and, deſcending obliquely downwards and forwards, is

Inſerted into the upper lip, near the corner of the mouth, along with the levator anguli oris.

Uſe. To draw the corner of the mouth obliquely outwards, and upwards, towards the external canthus of the eye.

The common muſcle is the

ORBICULARIS ORIS.

This muſcle is, in a great meaſure, formed by the muſcles that move the lips; the fibres of the ſuperior deſcending, thoſe of the inferior aſcending, and decuſſating each other about the corner of the mouth, run along the lip to join thoſe of the oppoſite ſide, ſo that the fleſhy fibres appear to ſurround the mouth like a ſphincter.

Uſe. To ſhut the mouth, by contracting and drawing both lips together, and to counteract all the muſcles that aſſiſt in forming it.

Sphincter labiorum, Douglas.
Semi-orbicularis, Winslow.
Constrictor oris, Cowper.

There is another small muscle described by Albinus, which he calls *Nasalis labii superioris*; but it seems to be only some fibres of the former connected to the septum nasi.

CHAP.

CHAP. VII.

MUSCLES *of the* LOWER JAW.

THE lower jaw has four pair of muſcles for its elevation or lateral motions, viz. two, which are ſeen on the ſide of the face, and two concealed by the angle of the jaw.

1. TEMPORALIS,

Ariſes, fleſhy, from a ſemicircular ridge of the lower and lateral part of the parietal bone, from all the pars ſquamoſa of the temporal bone, from the external angular proceſs of the os frontis, from the temporal proceſs of the ſphenoid bone, and from an aponeuroſis which covers it: from theſe different origins the fibres deſcend like radii towards the jugum, under which they paſs; and are

Inſerted, by a ſtrong tendon, into the upper part of the coronoid proceſs of the lower jaw; in the duplicature of which tendon this proceſs is incloſed as in a ſheath, being continued down all its fore-part to near the laſt dens molaris.

Uſe. To pull the lower jaw upwards, and preſs it againſt the upper, at the ſame time drawing it a little backwards.

N. B. This muſcle is covered by a tendinous membrane, called its *aponeuroſis*, which ariſes from the bones that give origin to the upper and ſemicircular part of the muſcle; and, deſcending over it, is inſerted into all the jugum, and the adjoining part of the os frontis.

The uſe of this membrane is to give room for the origin of a greater number of fleſhy fibres, to fortify the muſcle in its action, and to ſerve as a defence to it.

Crotaphite muſcle, Winſlow.

2. MAS-

2. MASSETER.

Ariſes, by ſtrong, tendinous, and fleſhy fibres, which run in different directions, from the ſuperior maxillary bone, where it joins the os malæ, and from the inferior and interior part of the zygoma, its whole length, as far back as the tubercle before the ſocket for the condyle of the lower jaw; the external fibres ſlanting backwards, and the internal forwards.

Inſerted into the angle of the lower jaw, and from that upwards to near the top of its coronoid proceſs.

Uſe. To pull the lower to the upper jaw, and, by means of its oblique decuſſation, a little forwards and backwards.

3. PTERYGOIDEUS INTERNUS.

Ariſes, tendinous and fleſhy, from the inner and upper part of the internal plate

of the pterygoid proceſs, filling all the ſpace between the two plates; and from the pterygoid proceſs of the os palati between theſe plates.

Inſerted into the angle of the lower jaw internally.

Uſe. To draw the jaw upwards, and obliquely towards the oppoſite ſide.

Pterygoideus major, Winſlow.

4. PTERYGOIDEUS EXTERNUS,

Ariſes from the outer ſide of the external plate of the pterygoid proceſs of the ſphenoid bone, from part of the tuberoſity of the os maxillare adjoining to it, and from the root of the temporal proceſs of the ſphenoid bone.

Inſerted into a cavity in the neck of the condyloid proceſs of the lower jaw; ſome of its fibres are inſerted into the ligament that connects the moveable cartilage and that proceſs to each other.

Uſe.

Uſe. To pull the lower jaw forwards, and to the oppoſite ſide; and to pull the ligament from the joint, that it may not be pinched during theſe motions: when both external pterygoid muſcles act, the fore-teeth of the under-jaw are puſhed forwards beyond thoſe of the upper jaw.

Pterygoideus minor, Winſlow.

CHAP. VIII.

The MUSCLES *which appear about the anterior part of the* NECK.

ON the ſide of the neck are two muſcles or layers.

1. MUSCULUS CUTANEUS, VULGO, PLATYSMA MYOIDES.

Ariſes, by a number of ſlender diſgregated fleſhy fibres, from the cellular ſubſtance that covers the upper parts of the deltoid and pectoral muſcles; in their aſcent they all unite to form a thin muſcle, which runs obliquely upwards along the ſide of the neck, adhering to the ſkin.

Inſerted into the lower jaw, between its angle and the origin of the depreſſor anguli

guli oris, to which it is firmly connected, and but ſlightly to the ſkin that covers the inferior part of the maſſeter muſcle and parotid glands.

Uſe. To aſſiſt the depreſſor anguli oris in drawing the ſkin of the cheek downwards; and when the mouth is ſhut, it draws all that part of the ſkin, to which it is connected, below the lower jaw, upwards.

Platyſma myoides, Galen.

Muſculus cutaneus, Winſlow.

Quadratus genæ, vel Latiſſimus colli, Douglas.

Latiſſimus colli, Albinus.

2. STERNO-CLEIDO-MASTOIDEUS.

Ariſes by two diſtinct origins; the anterior, tendinous and a little fleſhy, from the top of the ſternum near its junction with the clavicle; the poſterior, fleſhy, from the upper and anterior part of the clavicle; both unite a little above the anterior articulation

lation of the clavicle, to form one muſcle, which runs obliquely upwards and outwards, to be

Inſerted, by a thick ſtrong tendon, into the maſtoid proceſs, which it ſurrounds; and, gradually turning thinner, is inſerted as far back as the lambdoid future.

Uſe. To turn the head to one ſide, and bend it forwards.

Sterno-maſtoideus and *Cleido-maſtoideus*, Albinus.

Maſtoideus, Douglas.

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CHAP.

CHAP. IX.

MUSCLES *situated between the* LOWER JAW *and* OS HYOIDES.

THERE are four layers before, and two muſclesat the ſide.

The four layers are,

1. DIGASTRICUS,

Ariſes, by a fleſhy belly, intermixed with tendinous fibres, from the foſſa at the root of the maſtoid proceſs of the temporal bone, and ſoon becomes tendinous; runs downwards and forwards: the tendon paſſes generally through the ſtylo-hyoideus muſcle; then it is fixed by a ligament to the os hyoides; and, having received from that bone an addition of tendinous and muſcular fibres, runs obliquely forwards, turns fleſhy again, and is

In-

Inſerted, by this anterior belly, into a rough ſinuoſity at the inferior and anterior edge of that part of the lower jaw called the *chin*.

Uſe. To open the mouth, by pulling the lower jaw downwards and backwards; and, when the jaws are ſhut, to raiſe the larynx, and conſequently the pharynx, upwards, as in deglutition.

Biventer maxillæ inferioris, Albinus.

2. MYLO-HYOIDEUS,

Ariſes, fleſhy, from all the inſide of the lower jaw between the laſt dens molaris and the middle of the chin, where it joins with its fellow.

Inſerted into the lower edge of the baſis of the os hyoides, and joins with its fellow.

Uſe. To pull the os hyoides forwards, upwards, and to a ſide.

3. Ge-

3. GENIO-HYOIDEUS,

Ariſes, tendinous, from a rough protuberance in the middle of the lower jaw internally, or inſide of the chin.

Inſerted into the baſis of the os hyoides.

Uſe, To draw this bone forwards to the chin.

4. GENIO-HYO-GLOSSUS,

Ariſes, tendinous, from a rough protuberance in the inſide of the middle of the lower-jaw; its fibres run, like a fan, forwards, upwards, and backwards; and are

Inſerted into the tip, middle, and root of the tongue, and baſe of the os hyoides, near its cornu.

Uſe. According to the direction of its fibres, to draw the tip of the tongue backwards into the mouth, the middle downwards, and to render its dorſum concave;

to

to draw its root and os hyoides forwards, and to thruſt the tongue out of the mouth.

The two muſcles at the ſide are,

1. HYO-GLOSSUS,

Ariſes, broad and fleſhy, from the baſe, cornu, and appendix of the os hyoides; the fibres run upwards and outwards, to be

Inſerted into the ſide of the tongue, near the ſtylogloſſus.

Uſe. To pull the tongue inwards and downwards.

Baſio-cerato-chondro-gloſſus, Albinus.
Cerato-gloſſus, Douglas.

2. LINGUALIS,

Ariſes from the root of the tongue laterally; runs forwards between the hyogloſſus and genio-gloſſus, to be

Inſerted into the tip of the tongue, along with part of the ſtylo-gloſſus.

Uſe. To contract the ſubſtance of the tongue, and bring it backwards.

CHAP.

CHAP. X.

MUSCLES *ſituated between the* OS HYOIDES *and* TRUNK.

THESE may be divided into two layers.

The firſt layer conſiſts of two muſcles.

1. STERNO-HYOIDEUS,

Ariſes, thin and fleſhy, from the cartilaginous extremity of the firſt rib, the upper and inner part of the ſternum, and from the clavicle where it joins with the ſternum.

Inſerted into the baſe of the os hyoides.

Uſe. To pull the os hyoides downwards.

2. OMO-HYOIDEUS,

Ariſes, broad, thin, and fleſhy, from the ſu-

ſuperior coſta of the ſcapula, near the ſemilunar nitch, and from the ligament that runs acroſs it; thence aſcending obliquely, it becomes tendinous below the ſterno-cleido-maſtoid muſcle; and, growing fleſhy again, is

Inſerted into the baſe of the os hyoides, between its cornu and the inſertion of the ſterno-hyoideus.

Uſe. To pull the os hyoides obliquely downwards.

Coraco-hyoideus, Albinus and Douglas.

The ſecond layer conſiſts of three muſcles.

1. STERNO-THYROIDEUS,

Ariſes, fleſhy, from the whole edge of the uppermoſt bone of the ſternum internally, oppoſite to the cartilage of the firſt rib, from which it receives a ſmall part of its origin.

Inſerted into the ſurface of the rough line at the external part of the inferior edge of the thyroid cartilage.

Uſe. To draw the larynx downwards.

2. THY-

2. THYREO-HYOIDEUS,

Inſerted into part of the baſis, and almoſt all the cornu of the os hyoides.

Ariſes from the rough line, oppoſite to the former.

Uſe. To pull the os hyoides downwards, or the thyroid cartilage upwards.

Thyro-hyoideus, vel Hyo-thyroideus, Winſlow.

3. CRICO-THYROIDEUS,

Ariſes from the ſide and fore-part of the cricoid cartilage, running obliquely upwards.

Inſerted by two portions; the firſt, into the lower part of the thyroid cartilage; the ſecond, into its inferior cornu.

Uſe. To pull forwards and depreſs the thyroid, or to elevate and draw backwards the cricoid cartilage.

CHAP.

CHAP. XI.

MUSCLES *ſituated between the* LOWER JAW *and* OS HYOIDES *laterally.*

THEY are five in number. Three proceed from the ſtyloid proceſs of the temporal bone, from which they have half of their names; and two from the pterygoid proceſs of the ſphenoid bone.

The three from the ſtyloid proceſs are,

1. STYLO-GLOSSUS,

Ariſes, tendinous and fleſhy, from the ſtylo proceſs, and from a ligament that connects that proceſs to the angle of the lower jaw.

Inſerted into the root of the tongue, runs along its ſide, and is inſenſibly loſt near its tip.

Uſe.

Uſe. To draw the tongue laterally and backwards.

2. STYLO-HYOIDEUS.

Ariſes, by a round tendon, from the middle and inferior part of the ſtyloid proceſs.

Inſerted into the os hyoides at the junction of the baſe and cornu.

Uſe. To pull the os hyoides to one ſide, and a little upwards.

N. B. Its fleſhy belly is generally perforated by the tendon of the digaſtric muſcle, on one or both ſides. There is often another accompanying it, called *ſtylo-hyoideus alter*; and has the ſame origin, inſertion, and uſe.

3. STYLO-PHARYNGEUS,

Ariſes, fleſhy, from the root of the ſtyloid proceſs.

Inſerted into the ſide of the pharynx and back-part of the thyroid cartilage.

Uſe.

Uſe. To dilate and raiſe the pharynx and thyroid cartilage upwards.

The two from the pterygoid proceſs are,

1. CIRCUMFLEXUS, OR TENSOR PALATI,

Ariſes from the ſpinous proceſs of the ſphenoid bone, behind the foramen ovale, which tranſmits the third branch of the fifth pair of nerves; from the Euſtachian tube, not far from its oſſeous part: it then runs down along the pterygoideus internus, paſſes over the hook of the internal plate of the pterygoid proceſs by a round tendon, which ſoon ſpreads into a broad membrane.

Inſerted into the velum pendulum palati, and the ſemilunar edge of the os palati, and extends as far as the ſuture which joins the two bones. Generally ſome of its poſterior fibres join with the conſtrictor pharyngis ſuperior, and palato-pharyngeus.

Uſe. To ſtretch the velum, to draw it down-

downwards, and to a ſide towards the hook. It has little effect upon the tube, being chiefly connected to its oſſeous part.

Circumflexus palati, Albinus.

Spheno-ſalpingo-ſtaphilinus, ſeu *Staphilinus externus*, Winſlow.

Muſculus tubæ novus, Valſalva; vel *Palato-ſalpingeus*, Douglas.

2. LEVATOR PALATI,

Ariſes, tendinous and fleſhy, from the extremity of the pars petroſa of the temporal bone, where it is perforated by the Euſtachian tube, and alſo from the membranous part of the ſame tube.

Inſerted into the whole length of the velum pendulum palati, as far as the root of the uvula, and unites with its fellow.

Uſe. To draw the velum upwards and backwards, ſo as to ſhut the paſſage from the fauces into the mouth and noſe.

Levator palati mollis, Albinus.

Petro-ſalpingo-ſtaphilinus, vel *Salpingo-ſtaphilinus internus*, Winſlow.
Salpingo-ſtaphilinus, Valſalva. *Pterigo-ſtaphilinus externus, vulgo*, Douglas.
Spheno-ſtaphilinus, Couper.

Previous to the deſcription of the muſcles ſituated about the paſſage into the throat, it will be neceſſary to mention the principal parts to which they are connected.

Upon looking into any perſon's mouth, when wide opened, we ſee a ſoft curtain hanging from the palate-bones, named *velum pendulum palati*. In the middle of which, we likewiſe obſerve a papilla projecting from the velum, named *uvula*, or *pap of the throat*. From each ſide of the uvula, at its root, two arches, or columns, are ſent down; the anterior to the root of the tongue, the poſterior to the pharynx. Between theſe arches, on each ſide, the cellular glands called *amygdalæ*, or *almonds of the ears*, are ſituated.

The

The common opening behind the anterior arch may be named *fauces*, or *top of the throat*, from which there are ſix paſſages, viz. two upwards, being one to each noſtril: two at the ſides, or one to each ear, called the *Euſtachian tubes*: two downwards; the anterior is the paſſage through the *glottis* and *larynx*, into the *trachea*, which terminates in the lungs; the poſterior is the largeſt, named *pharynx*, or top of the *œſophagus*, which leads to the ſtomach.

CHAP. XII.

MUSCLES *ſituated about the entry to the* FAUCES.

THERE are two on each ſide, and a ſingle one in the middle.

The two on each ſide are,

1. CONSTRICTOR ISTHMI FAUCIUM,

Ariſes, by a ſlender beginning, from the ſide of the tongue, near its root; from thence running upwards, within the anterior arch, before the amygdala, it is

Inſerted into the middle of the velum pendulum palati, at the root of the uvula anteriorly, being connected with its fellow, and with the beginning of the palato-pharyngeus.

Uſe. Draws the velum towards the root of the

the tongue, which it raiſes at the ſame time, and, with its fellow, contracts the paſſage between the two arches, by which it ſhuts the opening into the fauces.

Gloſſo-ſtaphilinus, Winſlow and Douglas.

2. PALATO-PHARYNGEUS.

Ariſes, by a broad beginning, from the middle of the velum pendulum palati, at the root of the uvula poſteriorly, and from the tendinous expanſion of the circumflexus palati. The fibres are collected within the poſterior arch behind the amygdala, and run backwards to the top and lateral part of the pharynx, where the fibres are ſcattered, and mix with thoſe of the ſtylo-pharyngeus.

Inſerted into the edge of the upper and back part of the thyroid cartilage; ſome of its fibres being loſt between the membrane of the pharynx and the two inferior conſtrictors.

Uſe. Draws the uvula and velum downwards

wards and backwards; and at the same time pulls the thyroid cartilage and pharynx upwards, and shortens it: with the constrictor superior and tongue, it assists in shutting the passage into the nostrils; and, in swallowing, it thrusts the food from the fauces into the pharynx.

Thyro-staphilinus, Douglas.

Thyro-pharyngo-staphilinus, Winslow.

SALPINGO-PHARYNGEUS of Albinus is composed of a few fibres of this muscle, which

Arise from the anterior and lower part of the cartilaginous extremity of the Eustachian tube; and are

Inserted into the inner part of the last-mentioned muscle.

Use. To assist the former, and to dilate the mouth of the tube.

The

The one in the middle is the

AZYGOS UVULÆ.

Ariſes, fleſhy, from the extremity of the ſuture which joins the palate-bones, runs down the whole length of the velum and uvula, reſembling a ſmall earth-worm, and adhering to the tendons of the circumflexi.

Inſerted into the tip of the uvula.

Uſe. Raiſes the uvula upwards and forwards, and ſhortens it.

Palato-ſtaphilinus, Douglas.

Staphilinus, or *Epiſtaphilinus*, Winſlow.

CHAP. XIII.

MUSCLES *ſituated on the poſterior part of the* PHARYNX.

OF theſe there are three pair.

1. CONSTRICTOR PHARYNGIS INFERIOR,

Ariſes from the ſide of the thyroid cartilage, near the attachment of the ſterno-hyoideus and thyreo-hyoideus muſcles; and from the cricoid cartilage, near the crico-thyroideus. This muſcle is the largeſt of the three, and is

Inſerted into the white line, where it joins with its fellow; the ſuperior fibres running obliquely upwards, covering nearly one half of the middle conſtrictor, and terminating in a point; the inferior fibres run more tranſ-

tranſverſely, and cover the beginning of the œſophagus.

Uſe. To compreſs that part of the pharynx which it covers, and to raiſe it with the larynx a little upwards.

Thyro-pharyngeus, *Crico-pharyngeus*, Douglas.

2. CONSTRICTOR PHARYNGIS MEDIUS.

Ariſes from the appendix of the os hyoides, from the cornu of that bone, and from the ligament which connects it to the thyroid cartilage; the fibres of the ſuperior part running obliquely upwards, and, covering a conſiderable part of the ſuperior conſtrictor, terminate in a point.

Inſerted into the middle of the cuneiform proceſs of the os occipitis, before the foramen magnum, and joined to its fellow at a white line in the middle back part of the pharynx. The fibres at the middle part

run more tranſverſely than thoſe above or below.

Uſe. To compreſs that part of the pharynx which it covers, and to draw it and the os hyoides upwards.

Hyo-pharyngeus, *Syndeſmo-pharyngeus*, Douglas.

3. CONSTRICTOR PHARYNGIS SUPERIOR.

Ariſes, above, from the cuneiform proceſs of the os occipitis, before the foramen magnum, near the holes where the ninth pair of nerves paſſes out; lower down, from the pterygoid proceſs of the ſphenoid bone; from the upper and under jaw, near the roots of the laſt dentes molares; and between the jaws, it is continued with the buccinator muſcle, and with ſome fibres from the root of the tongue and from the palate.

Inſerted into a white line in the middle of the pharynx, where it joins with its fellow,

low, and is covered by the conſtrictor medius.

Uſe. To compreſs the upper part of the pharynx, and draw it forwards and upwards.

Cephalo-pharyngeus, Pterygo-pharyngeus, Mylo-pharyngeus, Gloſſo-pharyngeus, Douglas.

CHAP. XIV.

Muscles *situated about the* Glottis.

THEY conſiſt generally of four pair of ſmall muſcles, and a ſingle one.

1. CRICO-ARYTÆNOIDEUS POSTICUS,

Ariſes, fleſhy, from the back-part of the cricoid cartilage, and is

Inſerted into the poſterior part of the baſe of the arytenoid cartilage.

Uſe. To open the rima glottidis a little; and, by pulling back the arytenoid cartilage, to ſtretch the ligament ſo as to make it tenſe.

2. CRICO ARTYÆNOIDEUS LATERALIS,

Ariſes, fleſhy, from the cricoid cartilage, la-

laterally, where it is covered by part of the thyroid, and is

Inſerted into the ſide of the baſe of the arytenoid cartilage near the former.

Uſe. To open the rima glottidis, by pulling the ligaments from each other.

3. THYREO-ARYTÆNOIDEUS.

Ariſes from the under and back part of the middle of the thyroid cartilage; and, running backwards and a little upwards, alongſt the ſide of the glottis, is

Inſerted into the arytenoid cartilage, higher up and farther forwards than the crico-arytænoideus lateralis.

Uſe. To pull the arytenoid cartilage forwards nearer to the middle of the thyroid, and conſequently to ſhorten and relax the ligament of the larynx or glottis vera.

4. AR-

4. ARYTÆNOIDEUS OBLIQUUS.

Ariſes from the baſe of one arytenoid cartilage; and, croſſing its fellow, is

Inſerted near the tip of the other arytenoid cartilage.

Uſe. When both act, they pull the arytenoid cartilages towards each other.

N. B. Very often one of theſe is wanting.

Arytænoideus minor, Douglas.

The ſingle muſcle is the

ARYTÆNOIDEUS TRANSVERSUS,

Ariſes from the ſide of one arytenoid cartilage, from near its articulation with the cricoid to near its tip. The fibres run ſtraight acroſs; and are

Inſerted, in the ſame manner, into the other arytenoid cartilage.

Uſe. To ſhut the rima glottidis, by bring-

ing

ing theſe two cartilages, with the ligaments, nearer one another.

Arytænoideus major, Douglas.

Beſides theſe, there are a few diſgregated muſcular fibres on each ſide; which, from their general direction, are named,

1. THYREO-EPIGLOTTIDEUS,

Ariſes, by a few pale diſgregated fibres, from the thyroid cartilage; and is

Inſerted into the epiglottis laterally.

Uſe. To draw the epiglottis obliquely downwards, or, when both act, directly downwards; and, at the ſame time, it expands that ſoft cartilage.

2. ARYTÆNO-EPIGLOTTIDEUS,

Ariſes, by a number of ſmall fibres, from the lateral and upper part of the arytænoid cartilage; and, running along the outer ſide of the external rima, is

In-

Inserted into the epiglottis along with the former.

Use. To pull that side of the epiglottis towards the external rima; or, when both act, to pull it close upon the glottis. It is counteracted by the elasticity of the epiglottis.

CHAP.

CHAP. XV.

MUSCLES *situated on the anterior part of the* ABDOMEN.

THEY conſiſt of three broad layers on each ſide of the belly; always a long one, and generally alſo a ſhort one, on each ſide of the linea alba.

The three layers are,

1. OBLIQUUS DESCENDENS EXTERNUS, *Ariſes*, by eight heads, from the lower edges of an equal number of inferior ribs, at a little diſtance from their cartilages: it always intermixes, in a ſerrated manner, with portions of the ſerratus major anticus; and generally coheres to the pectoralis major, intercoſtals, and latiſſimus dorſi; which laſt covers the edge of a portion of it extended

tended from the laſt rib to the ſpine of the os ilium. From theſe origins the fibres run down obliquely forwards, and terminate in a thin broad tendon, whoſe fibres are continued in the ſame direction.

Inſerted into the whole length of the *linea alba* *, becomes thicker towards the lower part of the abdomen, and is perforated in the middle by the umbilicus †. On the outſide of the rectus muſcle, the tendon of the external oblique appears whiter than elſewhere, by its being there connected with the tendons of the internal oblique and tranſ-

* The *linea alba* is formed by the tendinous fibres of the two oblique and tranſverſe muſcles, interlaced with thoſe of the oppoſite ſide, the whole way from the cartilago enſiformis to the os pubis; ſo that ſome think they ſhould be called three digaſtric muſcles, with a broad middle tendon and two fleſhy bellies.

† The *umbilicus* was originally the paſſage for the veſſels that connected the fœtus to the ſecundines; and is really a hole through the teguments and tendons, filled up only by a cellular ſubſtance, and covered within by the peritoneum.

tranſverſe muſcles; ſo that this part has been called *Linea ſemilunaris*, from its curved ſhape. The under part of the tendon divides into two columns, which leaves an oval ſpace between them, named the *ring* § of the external oblique muſcle, for the paſſage of the ſpermatic cord in the male, or round ligament of the womb: The anterior ſuperior column paſſes over the cartilage between the oſſa pubis, and is fixed to the oppoſite os pubis; the other is fixed to the os pubis of the ſame ſide. It is alſo inſerted, tendinous and fleſhy, into the middle of the ſpine of the ilium.

From that part, which is named its *anterior ſuperior ſpinous proceſs*, it is ſtretched tendinous to the os pubis, and is named *Pou-*

§ The *ring* of the external oblique muſcle is made ſomewhat circular, by a thin tendinous or rough cellular ſubſtance, which helps to fill it up; and tho' a few muſcular fibres of the internal are ſeparated, yet the ſtricture in herniæ only happens in the tendon of the external.

Poupart's or *Fallopius's ligament* *. From this ligament it ſends a tendinous layer, which is loſt in the membranous faſcia of the thigh.

Uſe. Supports and compreſſes the peritoneum and abdomen; aſſiſts the evacuations of fæces and urine, and likewiſe in the excluſion of the fœtus; thruſts the diaphragm upwards, and draws down the ribs in expiration; bends the body obliquely when the ribs are fixed, and raiſes the pelvis obliquely.

Obliquus externus abdominis, Albinus.

Obliquus deſcendens, Douglas.

2. OB-

* *Poupart's*, or *Fallopius's ligament*, is the inferior part of the tendon of the external oblique, extending from the anterior ſuperior ſpinous proceſs of the ilium to the os pubis, where it is thickeſt, in order to ſtrengthen the inferior part of the abdomen: here it is not inſerted into any bone, but paſſes over the blood-veſſels of the inferior extremity; and in women, from the gerater ſize of the pelvis, is longer and looſer, by which they are more ſubject to crural herniæ; but, by the ſize of the ſpermatic cord, men are more liable to the inguinal.

2. OBLIQUUS ASCENDENS INTERNUS,

Ariſes from the ſpine of the ilium, the whole length between the poſterior and ſuperior anterior ſpinous proceſs; from the os ſacrum and the three undermoſt lumbar vertebræ, by a tendon common to it and to the ſerratus poſticus inferior muſcle; from Poupart's ligament, at the middle of which it ſends off the beginning of the cremaſter muſcle; and the ſpermatic cord in the male, or round ligament of the womb, paſſes under its thin edge, except a few detached fibres.

Inſerted into the cartilago enſiformis, into the cartilages of the ſeventh and thoſe of all the falſe ribs; but, at the upper part, it is extremely thin, reſembling a cellular membrane, and only becomes fleſhy at the cartilage of the tenth rib. Here its tendon divides into two layers *; the anterior layer, with

* To obtain a proper view of the two layers of the ten-

with a great portion of the inferior part of the poſterior layer, joins the tendon of the external oblique, and runs over the rectus to be inſerted into the whole length of the linea alba. The poſterior layer joins the tendon of the tranſverſalis muſcle as low as half-way between the umbilicus and os pubis; but, below this place, only a few fibres of the poſterior layer are ſeen, and the reſt of it paſſes before the rectus muſcle, and is inſerted into the linea alba; ſo that the whole tendon of the external oblique muſcle, with the anterior layer of the internal

tendon of the internal oblique muſcle, both the oblique muſcles ſhould be raiſed as far forwards as their joining near the linea ſemilunaris; then the tendon before the rectus muſt be cut parallel to the linea alba, and turned outwards as far as the outer edge of the rectus; by which the whole of the rectus is brought into view, and the tendons are preſerved. But Douglas directs to cut the poſterior layer of the internal oblique, where it joins with the tranſverſalis: by this method the rectus is laid bare; but the ſtructure of the tendinous ſheath, which incloſes it, is deſtroyed.

nal oblique, paſſes before the rectus muſcle; and the whole poſterior layer of the internal oblique, together with the whole tendon of the tranſverſalis muſcle, excepting at the inferior part, paſs behind the rectus, and are inſerted into the linea alba. At its undermoſt part it is inſerted into the forepart of the os pubis.

Uſe. To aſſiſt the former; but it bends the trunk in the reverſe direction.

Obliquus internus abdominis. Albinus and Winſlow.

Obliquus aſcendens, Douglas.

3. TRANSVERSALIS,

Ariſes tendinous, but ſoon becoming fleſhy from the inner or back part of the cartilages of the ſeven lower ribs, where ſome of its fibres are continued with thoſe of the diaphragm and the intercoſtal muſcles; by a broad thin tendon, connected to the tranſverſe proceſſes of the laſt vertebra of the back-

back and the four ſuperior vertebræ of the loins; fleſhy, from the whole ſpine of the os ilium internally, and from the tendon of the external oblique muſcle, where it intermixes with ſome fibres of the internal oblique.

Inſerted into the cartilago enſiformis, and into the whole length of the linea alba, excepting its lowermoſt part.

Uſe. To ſupport and compreſs the abdominal bowels; and it is ſo particularly well adapted for the latter purpoſe, that it might be called the *proper conſtrictor* of the abdomen.

Tranſverſus abdominis, Albinus.

The long muſcle in the middle is named,

RECTUS ABDOMINIS,

Ariſes, by two heads, from the ligament of the cartilage which joins the two oſſa pubis to each other; runs upwards the whole length of, and parallel to, the linea

linea alba, growing broader and thinner as it aſcends.

Inſerted into the cartilages of the three inferior true ribs, and often intermixes with ſome fibres of the pectoral muſcle.

It is generally divided by three tendinous interſections; the firſt is at the umbilicus, the ſecond where it runs over the cartilage of the ſeventh rib, the third in the middle between theſe; and there is commonly a half interſection below the umbilicus: Theſe ſeldom penetrate through the whole thickneſs of the muſcle; they adhere firmly to the anterior part of the ſheath, but very ſlightly to the poſterior layer.

Uſe. To compreſs the fore-part, but more particularly the lower part of the belly; to bend the trunk forwards, or to raiſe the pelvis. By its tendinous interſections, it is enabled to contract at any of the intermediate ſpaces; and, by its connection with the tendons of the other muſcles, it is prevented from changing place, and from ri-

ſing into a prominent form when in action.

The ſhort muſcle in the middle is named

PYRAMIDALIS,

Ariſes along with the rectus; and, running upwards within the ſame ſheath, is

Inſerted, by an acute termination, near half-way between the os pubis and umbilicus, into the linea alba and inner edge of the rectus muſcle.

As it is frequently wanting in both ſides, without any inconvenience, its

Uſe ſeems to be, to aſſiſt the inferior part of the rectus.

CHAP.

CHAP. XVI.

MUSCLES *about the Male Organs of* GENERATION.

THE *teſticles* are ſaid to have a thin muſcle common to both, and have one proper to each.

The ſuppoſed common muſcle is called the

DARTOS.

This appears to be no more than a condenſation of the cellular membrane lining the ſcrotum; yet the ſkin here is capable of being corrugated and relaxed in a greater degree than in other places.

The muſcle proper to each teſticle is the

CREMASTER.

Ariſes from the internal oblique, where a few fibres of that muſcle intermix with the tranſverſalis, near the junction of the os ilium and pubis, over which part it paſſes, after having pierced the ring of the external oblique; and then it deſcends upon the ſpermatic cord.

Inſerted into the tunica vaginalis of the teſticle, upon which it ſpreads, and is inſenſibly loſt.

Uſe. To ſuſpend and draw up the teſticle, and to compreſs it in the act of coition.

The penis has three pair of muſcles.

1. ERECTOR PENIS,

Ariſes, tendinous and fleſhy, from the tuberoſity of the os iſchium, and runs upwards, embracing the whole crus of the penis.

Inſerted into the ſtrong tendinous membrane

brane that covers the corpora cavernoſa penis, near as far up as the union of theſe bodies.

Uſe. To compreſs the crus penis, by which the blood is puſhed from it into the fore-part of the corpora cavernoſa; and the penis is by that means more completely diſtended. The erectores ſeem likewiſe to keep the penis in its proper direction.

Iſchio-cavernoſus, Winſlow.

2. ACCELERATOR URINÆ, SEU EJACULATOR SEMINIS,

Ariſes, fleſhy, from the ſphincter ani and membranous part of the urethra; and tendinous from the crus, near as far forwards as the beginning of the corpus cavernoſum penis; the inferior fibres run more tranſverſely, and the ſuperior deſcend in an oblique direction.

Inſerted into a line in the middle of the bulb, where it joins with its fellow, by which the bulb is completely incloſed.

Uſe. To drive the urine or ſemen forwards; and, by graſping the bulb of the urethra, to puſh the blood towards its corpus cavernoſum and the glans, by which they are diſtended.

Bulbo-cavernoſus, Winſlow.

3. TRANSVERSUS PERINEI,

Ariſes from the tough fatty membrane that covers the tuberoſity of the os iſchium; from thence it runs tranſverſely inwards, and is

Inſerted into the accelerator urinæ, and into that part of the ſphincter ani which covers the bulb.

Uſe. To dilate the bulb, and draw the perineum and verge of the anus a little outwards and backwards.

Tranſverſalis urethræ, Winſlow.

Tranſverſus perinei, Albinus.

Levator parvus, ſeu *externus*, Douglas.

There

There is often a fourth muſcle, named

TRANSVERSUS PERINEI ALTER,

Ariſes behind the former, runs more obliquely forwards, and is

Inſerted into that part of the accelerator urinæ which covers the anterior part of the bulb of the urethra.

Uſe. To aſſiſt the former.

Inferior proſtate, Winſlow.

Tranſverſus perinei alter, Albinus.

CHAP. XVII.

Muscles *of the* Anus.

THE *anus* has a ſingle muſcle, and one pair.

The ſingle muſcle is

SPHINCTER ANI,

Ariſes from the ſkin and fat that ſurround the verge of the anus on both ſides, near as far out as the tuber of the os iſchium; the fibres are gradually collected into an oval form, and ſurround the extremity of the rectum.

Inſerted, before, by a narrow point, into the perineum, acceleratores urinæ, and tranſverſi perinei; behind, by an acute termination, into the extremity of the os coccygis.

Uſe

Uſe. Shuts the paſſage through the anus into the rectum; pulls down the bulb of the urethra, by which it aſſiſts in ejecting the urine and ſemen.

Sphincter externus, Albinus and Douglas.

Sphincter cutaneus, Winſlow.

N. B. The ſphincter internus of Albinus and Douglas, is only that part of the circular fibres of the muſcular coat of the rectum which ſurrounds its extremity.

LEVATOR ANI.

Ariſes from the os pubis within the pelvis, as far up as the upper edge of the foramen thyroideum, and joining of the os pubis with the os iſchium; from the thin tendinous membrane that covers the obturator internus and coccygeus muſcles; from the ſpinous proceſs of the os iſchium; and its fibres run down like rays from a circumference to a centre.

Inſerted into the ſphincter ani, accelera-

tores urinæ, and anterior part of the two laſt bones of the coccygis; ſurrounds the extremity of the rectum, neck of the bladder, proſtate gland, and part of the veſiculæ ſeminales; ſo that its fibres behind and below the os coccygis joining it with its fellow, they, together, very much reſemble the ſhape of a funnel.

Uſe. To draw the rectum upwards after the evacuation of the fæces, and to aſſiſt in ſhutting it; to ſuſtain the contents of the pelvis, and to help in ejecting the ſemen, urine, and contents of the rectum; and, perhaps, by preſſing upon the veins, to contribute greatly to the erection of the penis.

CHAP. XVIII.

MUSCLES *of the Female Organs of* GENERATION.

THE *clitoris* has one pair,

ERECTOR CLITORIDIS,

Ariſes from the crus of the os iſchium internally, and in its aſcent covers the crus of the clitoris as far up as the os pubis.

Inſerted into the upper part of the crus and body of the clitoris.

Uſe. Draws the clitoris downwards and backwards; and may ſerve to make the body of the clitoris more tenſe, by ſqueezing the blood into it from its crus.

Firſt muſcle of the clitoris, Douglas.

The vagina has one pair,

SPHINCTER VAGINÆ,

Ariſes from the ſphincter ani, and from the poſterior ſide of the vagina, near the perineum; from thence it runs up the ſide of the vagina, near its external orifice, oppoſite to the nymphæ, and covers the corpus cavernoſum vaginæ.

Inſerted into the crus and body, or union of the crura clitoridis.

Uſe. Contracts the mouth of the vagina, and compreſſes its corpus cavernoſum.

Conſtrictor cunni, Albinus.

Second muſcle of the clitoris, Douglas.

The perineum has one pair.

TRANSVERSUS PERINEI,

Ariſes, as in the male, from the fatty cellular membrane which covers the tuberoſity of the os iſchium.

In-

Inſerted into the upper part of the ſphincter ani, and into a white hardiſh tough ſubſtance in the perineum, between the lower part of the pudendum and anus.

Uſe. To ſuſtain and keep the perineum in its proper place.

The anus, as in the male, has a ſingle muſcle, and one pair.

SPHINCTER ANI,

Ariſes, as in the male, from the ſkin and fat ſurrounding the extremity of the rectum.

Inſerted, above, into the white tough ſubſtance of the perineum; and below, into the point of the os coccygis.

Uſe. To ſhut the paſſage into the rectum; and, by pulling down the perineum, to aſſiſt in contracting the mouth of the vagina.

LEVATOR ANI,

Ariſes, as in the male, within the pelvis

vis, and descends along the inferior part of the vagina and rectum.

Inserted into the perineum, sphincter ani, extremity of the vagina, and rectum.

Use. To raise the extremity of the rectum upwards, to contract the inferior part of the rectum, and to assist in contracting and supporting the vagina; and, perhaps, by pressing on the veins, to contribute to the distention of the cells of the clitoris and corpus cavernosum of the vagina.

CHAP.

CHAP. XIX.

MUSCLES *ſituated within the* PELVIS.

OF theſe there are two pair.

1. OBTURATOR INTERNUS,

Ariſes from more than one half of the internal circumference of the foramen thyroideum, formed by the os pubis and iſchium: its inſide is covered by a portion of the levator ani; and appears to be divided into a number of faſciculi, which unite and form a roundiſh tendon, that paſſes out of the pelvis, between the poſterior ſacro-iſchiatic ligament and tuberoſity of the os iſchium, where it paſſes over the capſular ligament of the thigh-bone: it is incloſed, as in a ſheath, by the gemini muſcles.

Inſerted, by a round tendon, into the large pit at the root of the trochanter major.

In-

Uſe. To roll the os femoris obliquely outwards.

Marſupialis, ſeu *Obturator internus*; Douglas.

N. B. The inſertion of this muſcle ſhould not be proſecuted, until the muſcles of the thigh, to which it belongs, are diſſected. *Vid.* Chap. xxix.

2. COCCYGEUS,

Ariſes, tendinous and fleſhy, from the ſpinous proceſs of the os iſchium, and covers the inſide of the poſterior ſacro-iſchiatic ligament; from this narrow beginning, it gradually increaſes, to form a thin fleſhy belly, interſperſed with tendinous fibres.

Inſerted into the extremity of the os ſacrum, and near the whole length of the os coccygis laterally.

Uſe. To ſupport and move the os coccygis forwards, and to tie it more firmly to the ſacrum.

CHAP.

CHAP. XX.

MUSCLES *ſituated within the Cavity of the* ABDOMEN.

THESE conſiſt of a ſingle muſcle, and four pair.

DIAPHRAGMA,

This broad thin muſcle, which makes a complete ſeptum between the thorax and abdomen, is concave below and convex above; the middle of it on each ſide reaching as high within the thorax of the ſkeleton as the fourth rib, and is commonly divided into two portions.

1. The Superior or Greater Muſcle of the DIAPHRAGM,

Ariſes, by diſtinct fleſhy fibres, from the car-

cartilago enſiformis, from the cartilages of the ſeventh, and of all the inferior ribs on both ſides. The fibres from the cartilago enſiformis, and from the ſeventh and eighth ribs, run obliquely upwards and backwards; from the ninth and tenth, tranſverſely inwards and upwards; and from the eleventh and twelfth, obliquely upwards. From theſe different origins the fibres run, like radii from the circumference to the centre of a circle; and are

Inſerted into a cordiform tendon, of a conſiderable breadth, which is ſituated in the middle of the diaphragm; and in which, therefore, the fibres from oppoſite ſides are interlaced. Towards the right ſide the tendon is perforated by a triangular hole, for the paſſage of the vena cava inferior; and to the upper convex part of it the pericardium and mediaſtinum are connected.

2. The

2. The Inferior, Leſſer Muſcle, or Appendix of the DIAPHRAGM,

Ariſes from the ſecond, third, and fourth lumbar vertebræ, by eight heads; of which two in the middle, commonly called its *crura*, are the longeſt, and begin tendinous. Between the crura, the aorta and thoracic duct paſs; and, on the outſide of theſe, the great ſympathetic nerves and branches of the vena azygos perforate the ſhorter heads. The muſcular fibres run obliquely upwards and forwards, and form in the middle two fleſhy columns, which decuſſate and leave an oval ſpace between them for the paſſage of the œſophagus and eighth pair of nerves.

Inſerted, by ſtrong fleſhy fibres, into the poſterior part of the middle tendon.

Uſe. The diaphragm is the principal agent in reſpiration, particularly in inſpiration: for when it is in action, the fibres, from their

their different attachments, endeavour to bring themſelves into a plane towards the middle tendon, by which the cavity of the thorax is enlarged, particularly at the ſides, where the lungs are chiefly ſituated; and as the lungs muſt always be contiguous to the inſide of the thorax and upper ſide of the diaphragm, the air ruſhes into them, in order to fill up the increaſed ſpace. This muſcle is aſſiſted by the two rows of intercoſtals, which elevate the ribs, and the cavity of the thorax is more enlarged. In time of violent exerciſe, or whatever cauſe drives the blood with unuſual celerity towards the lungs, the pectoral muſcles, the ſerrati antici majores, the ſerrati poſtici ſuperiores, and ſcaleni muſcles, are brought into action. And in laborious inſpiration, the muſcles which ariſe from the upper part of the thorax, when the parts into which they are inſerted are fixed, likewiſe aſſiſt. In expiration, the diaphragm is relaxed and puſhed up by the preſſure of the abdominal

minal muſcles upon the viſcera of the abdomen; and at the ſame time that they preſs it upwards, they alſo, together with the ſterno-coſtales and ſerrati poſtici inferiores, pull down the ribs, and are aſſiſted in a powerful manner by the elaſticity of the cartilages that join the ribs to the ſternum; by which the cavity of the thorax is diminiſhed, and the air ſuddenly puſhed out of the lungs: and, in laborious expiration, the quadrati lumborum, ſacrolumbales, and longiſſimi dorſi, concur in pulling down the ribs.

The four pair are,

1. QUADRATUS LUMBORUM.

Ariſes, pretty broad, tendinous and fleſhy, from the poſterior part of the ſpine of the os ilium.

Inſerted into the tranſverſe proceſſes of all the vertebræ of the loins, into the laſt rib near

near the ſpine, and by a ſmall tendon into the ſide of the laſt vertebra of the back.

Uſe. To move the loins to one ſide, pull down the laſt rib, and, when both act, to bend the loins forwards.

Quadratus, ſeu *Lumbaris externus*, Winſlow.

2. PSOAS PARVUS,

Ariſes, fleſhy, from the ſides of the two upper vertebræ of the loins, and ſends off a ſmall long tendon which ends thin and flat, and is

Inſerted into the brim of the pelvis, at the junction of the os ilium and pubis.

Uſe. To aſſiſt the pſoas magnus in bending the loins forwards; and, in certain poſitions, to aſſiſt in raiſing the pelvis.

N. B. This muſcle is very often wanting.

3. PSOAS MAGNUS.

Ariſes, fleſhy, from the ſide of the body, and

and tranſverſe proceſs of the laſt vertebra of the back; and, in the ſame manner, from all thoſe of the loins, by as many diſtinct ſlips.

Inſerted, tendinous, into the trochanter minor of the os femoris; and fleſhy into that bone, a little below the ſame trochanter.

Uſe. To bend the thigh forwards; or, when the inferior extremity is fixed, to aſſiſt in bending the body.

Pſoas, ſeu *Lumbaris internus*, Winſlow.

4. ILIACUS INTERNUS.

Ariſes, fleſhy, from the tranſverſe proceſs of the laſt vertebra of the loins, from all the inner lip of the ſpine of the os ilium, from the edge of that bone between its anterior ſuperior ſpinous proceſs and the acetabulum, and from moſt of the hollow part of the ilium. It joins with the pſoas magnus, where it begins to become tendinous; and is

Inſerted along with it.

Uſe.

Uſe. To aſſiſt the pſoas in bending the thigh, and to bring it directly forwards.

N. B. The inſertion of the two laſt muſcles ſhould not be proſecuted till the muſcles of the thigh are diſſected.

CHAP.

CHAP. XXI.

MUSCLES *situated on the Anterior Part of the* THORAX.

THESE may be divided into two layers. The firſt layer conſiſts of one muſcle, named

PECTORALIS MAJOR,

Ariſes from the cartilaginous extremities of the fifth and ſixth ribs, where it always intermixes with the external oblique muſcle of the abdomen; from almoſt the whole length of the ſternum, and from near half of the anterior part of the clavicle: The fibres run towards the axilla in a folding manner.

Inſerted, by two broad tendons, which croſs each other at the upper and inner part

of the os humeri, above the insertion of the deltoid muscle, and outer side of the groove for lodging the tendon of the long head of the biceps.

Use. To move the arm forwards, and obliquely upwards, towards the sternum.

Pectoralis, Albinus.

The second layer consists of three muscles;

1. SUBCLAVIUS,

Arises tendinous from the cartilage that joins the first rib to the sternum.

Inserted, after becoming fleshy, into the inferior part of the clavicle, which it occupies from within an inch or so of the sternum, as far outwards as to its connection, by ligament, with the coracoid process of the scapula.

Use. To pull the clavicle downwards and forwards.

2. PECTORALIS MINOR,

Ariſes, tendinous and fleſhy, from the upper edge of the third, fourth, and fifth ribs, near where they join with their cartilages.

Inſerted, tendinous, into the coracoid proceſs of the ſcapula; but ſoon grows fleſhy and broad.

Uſe. To bring the ſcapula forwards and downwards, or to raiſe the ribs upwards.

Serratus anticus, Albinus.

Serratus minor anticus, Douglas.

3. SERRATUS MAGNUS,

Ariſes from the nine ſuperior ribs, by an equal number of fleſhy digitations, reſembling the teeth of a ſaw.

Inſerted, fleſhy, into the whole baſe of the ſcapula internally, between the inſertion of the rhomboid and the origin of the ſub-

ſcapularis muſcles, being folded about the two angles of the ſcapula.

Uſe. To move the ſcapula forwards; and, when the ſcapula is forcibly raiſed, to draw upwards the ribs.

Serratus major anticus, Douglas.

CHAP.

CHAP. XXII.

MUSCLES *ſituated between the Ribs, and within the* THORAX.

BETWEEN the ribs, on each ſide, there are eleven double rows of muſcles, which are therefore named *intercoſtals*. Theſe decuſſate each other like the ſtrokes of the letter X.

Ariſe from the inferior acute edge of each ſuperior rib, and run obliquely forwards, the whole length from the ſpine to near the joining of the ribs with their cartilages; from which, to the ſternum, there is only a thin membrane covering the internal intercoſtals.

Inſerted into the upper obtuſe edge of each inferior rib, as far back as the ſpine, into which the poſterior portion is fixed.

INTERCOSTALES INTERNI,

Ariſe in the ſame manner as the external: but they begin at the ſternum, and run obliquely backwards, as far as the angle of the rib; and from that to the ſpine they are wanting.

Inſerted in the ſame manner as the external.

Uſe. By means of theſe muſcles, the ribs are equally raiſed upwards during inſpiration. Their fibres being oblique, give them a greater power of bringing the ribs near each other, than could be performed by ſtraight ones. But, by the obliquity of the fibres, they are almoſt brought contiguous: and, as the fixed points of the ribs are before and behind, if the external had been continued forwards to the ſternum, and the internal backwards to the ſpine, it would have hindered their motion, which is greateſt in the middle, though the obliquity of the ribs

ribs renders it leſs perceptible; and, inſtead of raiſing the fibres fixed to the ſternum and ſpine, would have depreſſed the ribs.

N. B. The portions of the external intercoſtals which ariſe from the tranſverſe proceſſes of the vertebræ, where the ribs are fixed to them, and other portions that paſs over one rib and terminate in the next below it, Albinus calls *Levatores coſtarum longiores et breviores.*

The portions of the internal that paſs over one rib, and are inſerted into the next below it, Douglas calls *Coſtarum depreſſores proprii Cowperii.*

Theſe portions of both rows aſſiſt in raiſing the ribs in the ſame manner as the reſt of the intercoſtals.

Supra-coſtales, and *Infra-coſtales*, Winſlow.

The muſcles within the thorax are one pair, viz.

TRIANGULARIS, or STERNO COSTALIS,

Ariſes, fleſhy and a little tendinous, from all the length of the cartilago enſiformis laterally, and from the edge of the lower half of the middle bone of the ſternum, from whence its fibres aſcend obliquely upwards and outwards.

Inſerted, generally by three triangular terminations, into the lower edge of the cartilages of the third, fourth, and fifth ribs, near where theſe join with the ribs.

Uſe. To depreſs theſe cartilages, and the extremities of the ribs; and conſequently to aſſiſt in contracting the cavity of the thorax.

This muſcle often varies; and is ſometimes inſerted into the cartilage of the ſecond rib, ſometimes into the cartilage of the ſixth rib.

CHAP.

CHAP. XXIII.

MUSCLES *ſituated on the Anterior Part of the* NECK *cloſe to the* VERTEBRÆ.

THESE conſiſt of one layer, formed by four muſcles.

1. LONGUS COLLI,

Ariſes, tendinous and fleſhy, from the bodies of the three ſuperior vertebræ of the back laterally; and from the tranſverſe proceſs of the third, fourth, fifth, and ſixth vertebræ of the neck, near their roots.

Inſerted into the fore-part of the bodies of all the vertebræ of the neck, by as many ſmall tendons, which are covered with fleſh.

Uſe. To bend the neck gradually forwards, and to one ſide.

2. RECTUS CAPITIS INTERNUS MAJOR,

Ariſes, from the anterior points of the tranſverſe proceſſes of the third, fourth, fifth, and ſixth vertebræ of the neck, by four diſtinct beginnings.

Inſerted into the cuneiform proceſs of the os occipitis, a little before the condyloid proceſs.

Uſe. To bend the head forwards.

Rectus anterior longus, Winſlow.

3. RECTUS CAPITIS INTERNUS MINOR,

Ariſes, fleſhy, from the fore-part of the body of the firſt vertebra of the neck, oppoſite to the ſuperior oblique proceſs.

Inſerted near the root of the condyloid proceſs of the os occipitis, under, and a little farther outwards than, the former muſcle.

Uſe. To nod the head forwards.

Rectus anterior brevis, Winſlow.

4. REC-

4. RECTUS CAPITIS LATERALIS,

Ariſes, fleſhy, from the anterior part of the point of the tranſverſe proceſs of the firſt vertebra of the neck.

Inſerted into the os occipitis, oppoſite to the foramen ſtylo-maſtoideum of the temporal bone.

Uſe. To bend the head a little to one ſide.

Tranſverſalis anticus primus, Winſlow.

CHAP. XXIV.

MUSCLES *ſituated on the Poſterior Part of the* TRUNK.

THESE may be divided into four layers, and a ſingle pair.

The firſt layer conſiſts of two muſcles, which cover almoſt the whole poſterior part of the trunk.

1. TRAPEZIUS, SEU CUCULARIS,

Ariſes, by a ſtrong round tendon, from the lower part of the protuberance in the middle of the os occipitis behind; and, by a thin membranous tendon, which covers part of the ſplenius and complexus muſcles, from the rough curved line that extends from the protuberance towards the maſtoid proceſs of the temporal bone; runs down

down along the nape of the neck, where it ſeems to ariſe from its fellow, and covers the ſpinous proceſſes of the ſuperior vertebræ of the neck; but ariſes from the ſpinous proceſſes of the two inferior, and from the ſpinous proceſſes of all the vertebræ of the back; adhering, tendinous, to its fellow, the whole length of its origin.

Inſerted, fleſhy, into the poſterior half of the clavicle; tendinous and fleſhy, into the acromion, and into almoſt all the ſpine of the ſcapula.

Uſe. Moves the ſcapula according to the three different directions of its fibres; for the upper deſcending fibres draw it obliquely upwards, the middle tranſverſe ſtraight fibres draw it directly backwards, and the inferior aſcending fibres draw it obliquely downwards and backwards.

N. B. Where it is inſeparably united to its fellow in the nape of the neck, it is named *Ligamentum Nuchæ* or *Colli*.

2. LA-

2. LATISSIMUS DORSI.

Ariſes, by a broad thin tendon, from the poſterior part of the ſpine of the os ilium, from all the ſpinous proceſſes of the os ſacrum and vertebræ of the loins, and from the ſeven inferior ones of the vertebræ of the back; alſo, tendinous and fleſhy, from the extremities of the three or four inferior ribs, a little beyond their cartilages, by as many diſtinct ſlips. The inferior fibres aſcend obliquely, and the ſuperior run tranſverſely, over the inferior angle of the ſcapula, towards the axilla, where they are all collected, twiſted, and folded.

Inſerted, by a ſtrong thin tendon, into the inner edge of the groove for lodging the tendon of the long head of the biceps.

Uſe. To pull the arm backwards and downwards, and to roll the os humeri.

N. B. The inſertion of this muſcle ſhould not be proſecuted till the muſcles of the os hu-

humeri, to which it belongs, are diſſected.

The ſecond layer conſiſts of three pair, two on the back, and one on the neck.

On the back,

1. SERRATUS POSTICUS INFERIOR,

Ariſes, by a broad thin tendon, in common with that of the latiſſimus dorſi, from the ſpinal proceſſes of the two inferior vertebræ of the back, and from the three ſuperior of the loins.

Inſerted into the lower edges of the four inferior ribs, at a little diſtance from their cartilages, by as many diſtinct fleſhy lips.

Uſe. To depreſs the ribs into which it is inſerted.

2. RHOMBOIDEUS,

This muſcle is divided into two portions.

1. *Rhomboideus major*, *ariſes*, tendinous, from

from the ſpinous proceſſes of the five ſuperior vertebræ of the back.

Inſerted into all the baſis of the ſcapula below its ſpine.

Uſe. To draw the ſcapula obliquely upwards, and directly inwards.

2. *Rhomboideus minor*, *ariſes*, tendinous, from the ſpinous proceſſes of the three inferior vertebræ of the neck, and from the ligamentum nuchæ.

Inſerted into the baſe of the ſcapula, oppoſite to its ſpine.

Uſe. To aſſiſt the former.

On the neck,

3. SPLENIUS.

Ariſes, tendinous, from the four ſuperior ſpinous proceſſes of the vertebræ of the back; tendinous and fleſhy, from the five inferior of the neck, and adheres firmly to the ligamentum nuchæ. At the third vertebra of the neck, the ſplenii recede from each

each other, ſo that part of the complexus muſcle is ſeen.

Inſerted, by as many tendons, into the five ſuperior tranſverſe proceſſes of the vertebræ of the neck; and tendinous and fleſhy, into the poſterior part of the maſtoid proceſs, and into the os occipitis, where it joins with the root of that proceſs.

Uſe. To bring the head and upper vertebræ of the neck backwards laterally; and, when both act, to pull the head directly backwards.

N. B. Albinus divides this muſcle into two; viz. That portion which ariſes from the five inferior ſpinous proceſſes of the neck, and is inſerted into the maſtoid proceſs and os occipitis, he calls *Splenius Capitis*; and that portion which ariſes from the third and fourth of the back, and is inſerted into the five ſuperior tranſverſe proceſſes of the neck, is called by him *Splenius Colli*.

The

The ſingle pair,

SERRATUS SUPERIOR POSTICUS,

Ariſes, by a broad thin tendon, from the ſpinous proceſſes of the three laſt vertebræ of the neck, and the two uppermoſt of the back.

Inſerted into the ſecond, third, fourth, and fifth ribs, by as many fleſhy ſlips.

Uſe. To elevate the ribs, and dilate the thorax.

The third layer conſiſts of three pair on the back, and three on the neck.

On the back,

1. SPINALIS DORSI,

Ariſes from the ſpinous proceſſes of the two uppermoſt vertebræ of the loins, and the three inferior of the back, by as many tendons.

Inſerted into the ſpinous proceſſes of the nine

nine uppermoſt vertebræ of the back, except the firſt, by as many tendons.

Uſe. To erect and fix the vertebræ, and to aſſiſt in raiſing the ſpine.

2. LONGISSIMUS DORSI,

Ariſes, tendinous without, and fleſhy within, from the ſide, and all the ſpinous proceſſes of the os ſacrum; from the poſterior ſpine of the os ilium; from all the ſpinous proceſſes; and from the roots of the tranſverſe proceſſes of the vertebræ of the loins.

Inſerted into all the tranſverſe proceſſes of the vertebræ of the back, chiefly by ſmall double tendons; alſo, by a tendinous and fleſhy ſlip, into the lower edge of all the ribs, except the two inferior, at a little diſtance from their tubercles.

Uſe. To extend the vertebræ, and to raiſe and keep the trunk of the body erect.

N. B. From the upper part of this muſcle there runs up a round fleſhy portion which joins with the cervicalis deſcendens.

3. SA-

3. SACRO-LUMBALIS,

Ariſes, in common with the longiſſimus dorſi.

Inſerted into all the ribs, where they begin to be curved forwards, by as many long and thin tendons; and,

From the upper part of the ſix or eight lower ribs, ariſe as many bundles of thin fleſhy fibres, which ſoon terminate in the inner-ſide of this muſcle, and are named *Muſculi ad Sacro-lumbalem Acceſſorii.*

Uſe. To pull the ribs down, and aſſiſt to erect the trunk of the body.

N. B. There is a fleſhy ſlip which runs from the upper part of this muſcle into the fourth, fifth, and ſixth tranſverſe proceſſes of the vertebræ of the neck, by three diſtinct tendons: it is named *Cervicalis Deſcendens;* and its *uſe* is to turn the neck obliquely backwards, and to one ſide.

On

On the neck,

1. COMPLEXUS.

Ariſes from the tranſverſe proceſſes of the ſeven ſuperior vertebræ of the back, and four inferior of the neck, by as many diſtinct tendinous origins; in its aſcent it receives a fleſhy ſlip from the ſpinous proceſs of the firſt vertebra of the back: from theſe different origins it runs upwards, and is every where intermixed with tendinous fibres.

Inſerted, tendinous and fleſhy, into the inferior edge of the protuberance in the middle of the os occipitis, and into a part of the curved line that runs forwards from that protuberance.

Uſe. To draw the head backwards, and to one ſide; and, when both act, to draw the head directly backwards.

N. B. The long portion of this muſcle that is ſituated next the ſpinous proceſſes, lies

lies more looſe, and has a roundiſh tendon in the middle of it; for which reaſon Albinus calls it *Biventer cervicis*.

2. TRACHELO-MASTOIDEUS,

Ariſes from the tranſverſe proceſſes of the three uppermoſt vertebræ of the back, and from the five lowermoſt of the neck, where it is connected to the tranſverſalis cervicis, by as many thin tendons, which unite into a belly, and run up under the ſplenius.

Inſerted into the middle of the poſterior ſide of the maſtoid proceſs, by a thin tendon.

Uſe. To aſſiſt the complexus; but it pulls the head more to a ſide.

Complexus minor, ſeu *Maſtoideus lateralis*, Winſlow.

Trachelo-maſtoideus, ſeu *Capitis par tertium Fallopii*, Douglas.

3. LE-

3. LEVATOR SCAPULÆ.

Ariſes, tendinous and fleſhy, from the tranſverſe proceſſes of the five ſuperior vertebræ of the neck, by as many diſtinct ſlips, which ſoon unite to form a muſcle that runs downwards and outwards.

Inſerted, fleſhy, into the ſuperior angle of the ſcapula.

Uſe. To pull the ſcapula upwards, and a little forwards.

Angularis, *vulgo Levator proprius*, Winſlow.

Elevator, ſeu *Muſculus patientiæ*, Douglas.

The fourth layer conſiſts of two pair on the back, two on the poſterior part of the neck, four ſmall pair ſituated immediately below the poſterior part of the occiput, and three on the ſide of the neck.

On

On the back,

1. SEMI-SPINALIS DORSI,

Ariſes, from the tranſverſe proceſſes of the ſeventh, eighth, ninth, and tenth vertebræ of the back, by as many diſtinct tendons, which ſoon grow fleſhy, and then become tendinous again; and are

Inſerted into the ſpinous proceſſes of all the vertebræ of the back above the eighth, and into the two lowermoſt of the neck, by as many tendons.

Uſe. To extend the ſpine obliquely backwards.

Semiſpinalis externus, ſeu *Tranſverſo-ſpinalis dorſi*, Winſlow.

1. MULTIFIDUS SPINÆ,

Ariſes from the ſide and ſpinous proceſſes of the os ſacrum, and from the poſterior part of the os ilium, where it joins with the

the ſacrum; from all the oblique and tranſverſe proceſſes of the vertebræ of the loins; from all the tranſverſe proceſſes of the vertebræ of the back, and from thoſe of the neck, except the three firſt, by as many diſtinct tendons, which ſoon grow fleſhy, run in an oblique direction, and are

Inſerted, by diſtinct tendons, into all the ſpinous proceſſes of the vertebræ of the loins, of the back, and of the neck, except the firſt.

Uſe. When the different portions of this muſcle act on one ſide, they extend the back obliquely, or move it laterally; but, if they act together on both ſides, they extend the vertebræ backwards.

Tranſverſo-ſpinalis lumborum, veterib. Sacer.

Semi-ſpinalis internus, ſive *Tranſverſo-ſpinalis dorſi.*

Semi-ſpinalis, ſive *Tranſverſo-ſpinalis colli, Pars interna*, Winſlow.

Tranſverſalis lumborum, vulgo Sacer.

Tranſverſalis dorſi.
Tranſverſalis colli, Douglas.

On the poſterior part of the neck,

1. SEMI-SPINALIS COLLI,

Ariſes, from the tranſverſe proceſſes of the uppermoſt ſix vertebræ of the back, by as many diſtinct tendons, aſcending obliquely under the complexus.

Inſerted into the ſpinous proceſſes of all the vertebræ of the neck, except the firſt and the laſt.

Uſe. To extend the neck obliquely backwards.

Semi-ſpinalis, ſive *Tranſverſo-ſpinalis colli*, Winſlow.
Spinalis cervicis, Albinus.
Spinalis, Douglas.

2. TRANSVERSALIS COLLI,

Ariſes from the tranſverſe proceſſes of the five uppermoſt vertebræ of the back, by as many

many tendinous and fleſhy origins; runs between the trachelo-maſtoideus, and ſplenius colli and cervicalis deſcendens.

Inſerted into the tranſverſe proceſſes of all the cervical vertebræ, except the firſt and the laſt.

Uſe. To turn the neck obliquely backward, and a little to one ſide.

Below the poſterior part of the occiput,

1. RECTUS CAPITIS POSTICUS MAJOR,

Ariſes, fleſhy, from the external part of the ſpinous proceſs of the ſecond vertebra of the neck; and grows broader in its aſcent, which is not ſtraight, but obliquely outwards.

Inſerted, tendinous and fleſhy, into the os occipitis, near the rectus capitis lateralis, and the inſertion of the obliquus capitis ſuperior.

Uſe. To pull the head backwards, and to aſſiſt a little in its rotation.

Rectus major, Winſlow and Douglas.

2. RECTUS CAPITIS POSTICUS MINOR,

Ariſes, by a narrow beginning, cloſe by its fellow, from a little protuberance in the middle of the back-part of the firſt vertebra of the neck, its outer edge being covered by the rectus major.

Inſerted, pretty broad, into the ſides of a dimple in the os occipitis, near its foramen magnum.

Uſe. To aſſiſt the rectus major in moving the head backwards.

Obliquus minor, Winſlow and Douglas.

3. OBLIQUUS CAPITIS SUPERIOR,

Ariſes from the tranſverſe proceſs of the firſt vertebra of the neck.

Inſerted, tendinous and fleſhy, into the os

os occipitis behind the back-part of the maſtoid proceſs of the temporal bone, and under the inſertion of the complexus muſcle.

Uſe. To draw the head backwards.

Obliquus major, Winſlow.

Obliquus ſuperior, Douglas.

4. OBLIQUUS CAPITIS INFERIOR,

Ariſes, fleſhy, from the ſpinous proceſs of the ſecond vertebra of the neck, its whole length; and, forming a thick fleſhy belly, is

Inſerted into the tranſverſe proceſs of the firſt vertebra of the neck.

Uſe. To give a rotatory motion to the head.

On the ſide of the neck,

1. SCALENUS ANTICUS,

Ariſes from the fourth, fifth, and ſixth tranſverſe proceſſes of the firſt vertebra of the neck, by as many tendons.

Inſerted, tendinous and fleſhy, into the

upper ſide of the firſt rib, near its cartilage.

Scalenus prior, Albinus.

Anterior portion of the firſt ſcalenus, Winſlow.

Firſt ſcalenus, Douglas.

2. SCALENUS MEDIUS.

Ariſes, from all the tranſverſe proceſſes of the vertebræ of the neck, by as many ſtrong tendons; the nerves to the ſuperior extremity paſs between it and the former.

Inſerted into the upper and outer part of the firſt rib, from its root, to within the diſtance of an inch from its cartilage.

Poſterior portion of the firſt ſcalenus, Winſlow.

Second ſcalenus, Douglas.

2. SCALENUS POSTICUS.

Ariſes from the fifth and ſixth tranſverſe proceſſes of the vertebræ of the neck.

In-

Inſerted into the upper edge of the ſecond rib, not far from the ſpine.

Poſterior portion of the ſecond ſcalenus, Winſlow.

Third ſcalenus, Douglas.

Uſe of the three ſcaleni: To bend the neck to one ſide; or, when the neck is fixed, to elevate the ribs, and to dilate the thorax.

There are a number of ſmall muſcles ſituated between the ſpinous and tranſverſe proceſſes of contiguous vertebræ, which are accordingly named,

1. INTERSPINALES COLLI,

The ſpace between the ſpinous proceſſes of the vertebræ of the neck, moſt of which are bifurcated, is filled up with fleſhy portions; which

Ariſe, double, from the ſpinous proceſs of the inferior vertebræ of the neck; and aſcend to be

Inſerted, in the ſame manner, into the

ſpinous proceſs of the ſuperior vertebra. They are five in number.

Uſe. To draw theſe proceſſes nearer to each other.

2. INTERTRANSVERSALES COLLI.

They begin from the tranſverſe proceſs of the firſt vertebra of the back, and fill up the ſpaces between the tranſverſe proceſſes of the vertebræ of the neck, which are likewiſe bifurcated; and, conſequently, there are ſix diſtinct double muſcles, which

Ariſe from the inferior tranſverſe proceſs of each vertebra of the neck, and firſt of the back, and are

Inſerted into the ſuperior tranſverſe proceſſes.

Uſe. To draw theſe proceſſes towards each other, and turn the neck a little to one ſide.

3. 4, 5. INTERSPINALES DORSI et LUMBORUM, and the INTERTRANSVERSALES DORSI,

Are rather ſmall tendons than muſcles, ſerving to connect the ſpinal and tranſverſe proceſſes.

6. INTERTRANSVERSALES LUMBORUM,

Are four diſtinct ſmall bundles of fleſh, which fill up the ſpaces between the tranſverſe proceſſes of the vertebræ of the loins, and ſerve to draw them towards each other.

CHAP. XXV.

MUSCLES *of the* SUPERIOR EXTREMITIES.

THESE may be divided into the muſcles that are ſituated on the ſcapula, on the os humeri, on the cubit or fore-arm, and on the hand.

Muſcles ſituated on the ſcapula.

Theſe are called *muſcles* of the *os humeri;* and are three behind, one along its inferior coſta, two before, and one beneath it.

Behind,

1. SUPRASPINATUS,

Ariſes, fleſhy, from all that part of the baſe of the ſcapula that is above its ſpine; alſo from the ſpine and ſuperior coſta; paſſes un-

under the acromion, and adheres to the capsular ligament of the os humeri.

Inserted, tendinous, into that part of the large protuberance on the head of the os humeri that is next the groove for lodging the tendon of the long head of the biceps.

Use. To raise the arm upwards; and, at the same time, to pull the capsular ligament from between the bones, that it may not be pinched.

2. INFRASPINATUS.

Arises, fleshy, from all that part of the base of the scapula that is between its spine and inferior angle; from the spine, as far as the cervix of the scapula. The fibres ascend and descend obliquely towards a tendon in the middle of the muscle, which runs forwards, and adheres to the capsular ligament.

Inserted, by a thick and short tendon, into the upper and middle part of the large

protuberance on the head of the os humeri.

Uſe. To roll the humerus outwards; to aſſiſt in raiſing, and in ſupporting it when raiſed; and to pull the ligament from between the bones.

N. B. Theſe two muſcles are covered with a tendinous membrane, from which a number of their fleſhy fibres ariſe. It ſerves beſides to ſtrengthen their actions, and keeps them from ſwelling too much outwardly when in action.

3. TERES MINOR,

Ariſes, fleſhy, from all the round edge of the inferior coſta of the ſcapula, and runs forwards along the inferior edge of the infraſpinatus muſcle, and adheres to the ligament.

Inſerted, tendinous, into the back part of the large protuberance on the head of the os

os humeri, a little behind and below the termination of the laſt-named muſcle.

Uſe. To roll the humerus outwards; to draw the humerus backwards; and to prevent the ligament from being pinched between the bones.

Along the inferior coſta of the ſcapula,

TERES MAJOR,

Ariſes, fleſhy, from the inferior angle of the ſcapula, and from all that portion of its inferior coſta that is rough and thicker than the reſt; its fleſhy fibres are continued over part of the infraſpinatus muſcle, to which they firmly adhere.

Inſerted, by a broad, ſhort, and thin tendon, into the ridge at the inner ſide of the groove for lodging the tendon of the long head of the biceps, along with the latiſſimus dorſi.

Uſe. To roll the humerus inwards, and to draw it backwards and downwards.

The

The two before the ſcapula.

1. DELTOIDES,

Ariſes, fleſhy, from all the poſterior part of the clavicle that the pectoralis major does not poſſeſs; tendinous and fleſhy, from the acromion, and lower margin of almoſt the whole ſpine of the ſcapula oppoſite to the inſertion of the cucullaris muſcle: from theſe origins it runs in three different directions, i. e. from the clavicle outwards and downwards; from the ſpine of the ſcapula outwards, forwards, and downwards; and from the acromion ſtraight downwards; and is compoſed of a number of faſciculi, which form a ſtrong fleſhy muſcle that covers the anterior part of the joint of the os humeri.

Inſerted, tendinous, into a rough protuberance in the outer ſide of the os humeri, near its middle, where the fibres of this muſcle intermix with ſome part of the brachialis externus.

Uſe.

Uſe. To pull the arm directly outwards and upwards, and a little forwards or backwards, according to the different directions of its fibres.

2. CORACO-BRACHIALIS,

Ariſes, tendinous and fleſhy, from the fore-part of the coracoid proceſs of the ſcapula; adhering, in its deſcent, to the ſhort head of the biceps.

Inſerted, tendinous and fleſhy, about the middle of the internal part of the os humeri, near the origin of the third head of the triceps, called *brachialis externus*, where it ſends down a thin tendinous expanſion to the internal condyle of the os humeri.

Uſe. To raiſe the arm upwards and forwards.

N. B. There paſſes a nerve through this muſcle, called *Muſculo-cutaneus*.

The

The one beneath the ſcapula,

SUPSCAPULARIS,

Ariſes, fleſhy, from all the baſe of the ſcapula internally, and from its ſuperior and inferior coſtæ, being compoſed of a number of tendinous and fleſhy faſciculi, which make prints on the bone; they all join together, fill up the hollow of the ſcapula, and paſs over the joint, adhering to the capſular ligament.

Inſerted, tendinous, into the upper part of the internal protuberance at the head of the os humeri.

Uſe. To roll the humerus inwards, and to draw it to the ſide of the body; and to prevent the capſular ligament from being pinched.

CHAP.

CHAP. XXVI.

MUSCLES *ſituated on the* OS HUMERI.

THESE are called

Muſcles of the *Cubit* or *Fore-arm.*

They conſiſt of two before, and two behind.

Before,

1. BICEPS FLEXOR CUBITI,

Ariſes, by two heads. The firſt and outermoſt, called *longus*, begins tendinous from the upper edge of the glenoid cavity of the ſcapula; paſſes over the head of the os humeri within the joint; and, in its deſcent without the joint, is incloſed in a groove near the head of the os humeri, by

a membranous ligament that proceeds from the capſular ligament and adjacent tendons. The ſecond, or innermoſt head, called *brevis*, ariſes, tendinous and fleſhy, from the coracoid proceſs of the ſcapula, in common with the coraco-brachialis muſcle. A little below the middle of the fore-part of the os humeri, theſe heads unite.

Inſerted, by a ſtrong roundiſh tendon, into the tubercle on the upper end of the radius internally.

Uſe. To turn the hand ſupine, and to bend the fore-arm.

N. B. At the bending of the elbow, where it begins to grow tendinous, it ſends off an aponeuroſis, which covers all the muſcles on the inſide of the fore-arm, and joins with another tendinous membrane, which is ſent off from the triceps extenſor cubiti, and covers all the muſcles on the outſide of the fore-arm; and a number of the fibres, from oppoſite fibres, decuſſate each other. It ſerves to ſtrengthen the

muſcles,

muſcles, by keeping them from ſwelling too much outwardly, when in action; and a number of their fleſhy fibres take their origin from it.

Biceps brachii, Albinus.

Coraco-radialis, ſeu *biceps*, Winſlow.

Biceps internus, Douglas.

2. BRACHIALIS INTERNUS.

Ariſes, fleſhy, from the middle of the os humeri, at each ſide of the inſertion of the deltoid muſcle, covering all the inferior and fore part of this bone, runs over the joint, and adheres firmly to the ligament.

Inſerted, by a ſtrong ſhort tendon, into the coronoid proceſs of the ulna.

Uſe. To bend the fore-arm, and to prevent the capſular ligament of the joint from being pinched.

Brachialis, Winſlow.

Behind,

1. TRICEPS EXTENSOR CUBITI,

Ariſes, by three heads; the firſt called *longus*, pretty broad and tendinous, from the inferior coſta of the ſcapula, near its cervix. The ſecond head, called *brevis*, ariſes by an acute, tendinous, and fleſhy beginning, from the back part of the os humeri, a little below its head, outwardly. The third, called *brachialis externus*, ariſes by an acute beginning, from the back part of the os humeri. Theſe three heads unite lower than the inſertion of the teres major, and cover the whole poſterior part of the humerus, from which they receive addition in their deſcent.

Inſerted into the upper and external part of the proceſs of the ulna, called *olecranon*, and partly into the condyles of the os humeri, adhering firmly to the ligament.

Uſe.

Uſe. To extend the fore-arm.

Anconeus major, *Anconeus externus*, and *Anconeus internus*, Winſlow.

Biceps externus, and *Brachialis externus*, Douglas.

3. ANCONEUS,

Ariſes, tendinous, from the poſterior part of the external condyle of the os humeri; it ſoon grows fleſhy, and is continued from the third head of the triceps.

Inſerted, fleſhy and thin, into a ridge on the outer and poſterior edge of the ulna, being continued ſome way below the olecranon, and covered with a tendinous membrane.

Uſe. To aſſiſt in extending the fore-arm.

Anconeus minor, Winſlow.

Anconeus, vel *Cubitalis Riolani.* Douglas.

CHAP.

CHAP. XXVII.

MUSCLES *ſituated on the* CUBIT *or* FOREARM *.

THESE may be divided into three claſſes: *firſt*, flexors and extenſors of the whole *hand*; *ſecond*, flexors and extenſors of the *fingers*; and, *third*, ſupinators and pronators, or thoſe that roll the *radius on the ulna*.

Firſt claſs conſiſts of three flexors, and three extenſors.

Flexors:

* In the following deſcription, the arm is ſuppoſed to hang by the ſide with the palm turned forwards; ſo that the radius and thumb are upon its outer ſide, and the ulna and little finger upon its inner ſide; whereas, when the muſcles are deſcribed in the leſs ſtraining poſture of pronation, as has been generally done by authors, the utmoſt confuſion is neceſſarily introduced in the application of the terms *outer* and *inner*, from the decuſſation of the radius and ulna.

Flexors:

1. PALMARIS LONGUS,

Ariſes, tendinous. from the internal condyle of the os humeri, ſoon grows fleſhy, and, after a ſhort progreſs, ſends off a long ſlender tendon.

Inſerted into the ligamentum carpi annulare, and into a tendinous membrane that is expanded on the palm of the hand, named *aponeuroſis palmaris;* which, above, begins at the tranſverſe or annular ligament of the wriſt, and, below, is fixed to the roots of the fingers.

Uſe. To bend the hand, and to ſtretch the membrane that is expanded on the palm.

Ulnaris gracilis, Winſlow.

N. B. This muſcle is ſometimes wanting; but the aponeuroſis palmaris is always to be found, and a ſmall muſcle named

PAL-

PALMARIS BREVIS,

Ariſes from the ligamentum carpi annulare, and tendinous membrane that is expanded on the palm of the hand.

Inſerted, by ſmall bundles of fleſhy fibres, into the ſkin and fat that covers the abductor minimi digiti, and into the os piſiforme.

Uſe. To aſſiſt in contracting the palm of the hand.

Palmaris cutaneus, Winſlow.

2. FLEXOR CARPI RADIALIS,

Ariſes, tendinous and fleſhy, from the internal condyle of the os humeri, and from the anterior part of the upper end of the ulna, where it firmly adheres to the pronator radii teres.

Inſerted, by a flat tendon, into the fore and upper part of the metacarpal bone that ſuſtains

ſuſtains the fore-finger, after running thro' a foſſa in the os trapezium.

Uſe. To bend the hand, and to aſſiſt in its pronation.

Radialis internus, Albinus and Winſlow.

3. FLEXOR CARPI ULNARIS,

Ariſes, tendinous, from the internal condyle of the os humeri. It has likewiſe a ſmall fleſhy beginning from the outer ſide of the olecranon; between which and the condyle the ulnar nerve paſſes to the fore-arm; and a number of its fleſhy fibres ariſe from the tendinous membrane which covers the fore-arm.

Inſerted, by a ſhort ſtrong tendon, into the os piſiforme; at a little diſtance from its inſertion, a ſmall ligament is ſent off to the metacarpal bone that ſuſtains the little finger.

Uſe. To aſſiſt the former in bending the hand.

Ulnaris internus, Albinus and Winſlow.

Extenſors:

1. EXTENSOR CARPI RADIALIS LONGIOR,

Ariſes, broad, thin, and fleſhy, immediately below the ſupinator radii longus, from the lower part of the external ridge of the os humeri, above its external condyle.

Inſerted, by a round tendon, into the poſterior and upper part of the metacarpal bone that ſuſtains the fore-finger.

Uſe. To extend and bring the hand backwards.

Radialis externus longior, Albinus.

Radialis externus primus, Winſlow.

2. EXTENSOR CARPI RADIALIS BREVIOR,

Ariſes, tendinous, from the external condyle of the os humeri, and from the ligament

ment that connects the radius to it, and runs along the outside of the radius.

Inserted, by a round tendon, into the upper and back part of the metacarpal bone that sustains the middle finger.

Use. To assist the last mentioned muscle.

Radialis externus brevior, Albinus.

Radialis secundus, Winslow.

EXTENSOR CARPI ULNARIS,

Arises, tendinous, from the external condyle of the os humeri; and, in its progress, fleshy from the middle of the ulna, where it passes over it. Its round tendon is inclosed by a membranous sheath, in a groove which is situated at the extremity of the ulna.

Inserted, by its round tendon, into the posterior and upper part of the metacarpal bone that sustains the little-finger.

Use. To assist the former in extending the hand.

Ulnaris externus, Albinus and Winslow.

Second Claſs.

The flexors and extenſors of the four fingers are, two long, and one ſmall flexor to each finger, and one extenſor.

1. FLEXOR SUBLIMIS PERFORATUS,

Ariſes, tendinous and fleſhy, from the internal condyle of the os humeri; tendinous from the coronoid proceſs of the ulna, near the edge of the cavity that receives the head of the radius; fleſhy from the tubercle of the radius; and membranous and fleſhy from the middle of the fore-part of the radius, where the flexor pollicis longus ariſes. Its fleſhy belly ſends off four round tendons before it paſſes under the ligament of the wriſt.

Inſerted into the anterior and upper part of the ſecond bone of each finger, being, near the extremity of the firſt bone, divided for the paſſage of the perforans.

Uſe.

Uſe. To bend the ſecond joint or phalanx of the fingers.

Sublimis, Albinus.

Perforatus, Douglas.

2. FLEXOR PROFUNDUS PERFORANS,

Ariſes, fleſhy, from the external ſide, and upper part of the ulna, for ſome way downwards, and from a large ſhare of the interoſſeous ligament. It ſplits into four tendons, a little before it paſſes under the ligamentum carpi annulare; and theſe paſs through the ſlits in the tendons of the flexor ſublimis.

Inſerted into the fore and upper part of the third or laſt bone of all the four fingers.

Uſe. To bend the laſt joint of the fingers.

Profundus, Albinus.

Perforans, Douglas.

The four ſmall flexors are named

LUMBRICALES,

Ariſe, thin and fleſhy, from the outſide of the tendons of the flexor profundus, a little above the lower edge of the ligamentum carpi annulare.

Inſerted, by long ſlender tendons, into the outer ſides of the broad tendons of the interoſſei muſcles, about the middle of the firſt joint.

Uſe. To increaſe the flexion of the fingers while the long flexors are in full action.

Extenſors:

EXTENSOR DIGITORUM COMMUNIS,

Ariſes, by an acute, tendinous, and fleſhy beginning, from the external condyle of the os humeri, where it adheres to the ſupinator radii brevis. Before it paſſes under the ligamentum carpi annulare externum, it ſplits into four tendons; ſome of which may

may be divided into ſeveral ſmaller; and about the fore-part of the metacarpal bones they remit tendinous filaments to each other.

Inſerted into the poſterior part of all the bones of the four fingers, by a tendinous expanſion.

Uſe. To extend all the joints of the fingers.

Third Claſs,

Conſiſts of four muſcles, viz. two *ſupinators*, and two *pronators*.

Supinators:

1. SUPINATOR RADII LONGUS,

Ariſes, by an acute and fleſhy origin, from the external ridge of the os humeri, above the external condyle, near as far up as the middle of that bone.

Inſerted into the outer-ſide of the inferior extremity of the radius.

Uſe. To roll the radius outwards, and conſequently the palm of the hand upwards.

Supinator longus, Albinus, Winſlow, and Douglas.

2. SUPINATOR RADII BREVIS,

Ariſes, tendinous, from the external condyle of the os humeri; tendinous and fleſhy, from the external and upper part of the ulna, and adheres firmly to the ligament that joins theſe two bones.

Inſerted into the head, neck, and tubercle of the radius, near the inſertion of the biceps, and ridge running from that downwards and outwards.

Uſe. To roll the radius outwards, and ſo bring the hand ſupine.

Pronators:

1. PRONATOR RADII TERES,

Ariſes, fleſhy, from the internal condyle of

of the os humeri, and tendinous from the coronoid proceſs of the ulna.

Inſerted, thin, tendinous, and fleſhy, into the middle of the poſterior part of the radius.

Uſe. To roll the radius, together with the hand, inwards.

2. PRONATOR RADII QUADRATUS,

Ariſes, broad, tendinous, and fleſhy, from the lower and inner part of the ulna; the fibres run tranſverſely, to be

Inſerted into the lower and anterior part of the radius, oppoſite to its origin.

Uſe. To turn the radius, together with the hand, inwards.

CHAP. XXVIII.

MUSCLES *ſituated on the* HAND *chiefly.*

THESE may be divided into four claſſes, viz. muſcles of the *thumb*, *fore-finger*, *little-finger*, and *metacarpal bones*.

Muſcles of the Thumb.

Theſe conſiſt of *three flexors*, *three extenſors*, *one abductor*, and *one adductor*.

Flexors:

1. FLEXOR LONGUS POLLICIS MANUS,

Ariſes, by an acute fleſhy beginning, from the upper part of the radius, immediately below its tubercle, and is continued down for ſome ſpace on the fore-part of this bone. It has likewiſe generally another origin from the internal condyle of the

the os humeri, which forms a distinct fleshy slip that terminates near the upper part of the origin from the radius.

Inserted into the last joint of the thumb, after having passed its tendon under the ligament of the wrist.

Use. To bend the last joint of the thumb.

Flexor tertii internodii, Douglas.

2. FLEXOR BREVIS POLLICIS MANUS,

Arises, from the os trapezoides, magnum, and unciforme of the carpus, and is divided into two portions by the tendon of the flexor pollicis longus.

Inserted into the ossa sesamoidea and first bone of the thumb.

Use. To bend the first joint of the thumb.

Flexor secundi internodii, Douglas.

3. FLEXOR OSSIS METACARPI POLLICIS, OR OPPONENS POLLICIS,

Arises, fleshy, from the os trapezium and

ligamentum carpi annulare, lying under the abductor pollicis.

Inſerted, tendinous and fleſhy, into the under and anterior part of the metacarpal bone of the thumb.

Uſe. To bring the thumb inwards, oppoſite to the other fingers.

Flexor primi internodii, Douglas.

Extenſors:

1. EXTENSOR OSSIS METACARPI POLLICIS MANUS,

Ariſes, fleſhy, from the middle and poſterior part of the ulna, immediately below the inſertion of the anconæus muſcle, from the poſterior part of the middle of the radius, and from the interoſſeous ligament.

Inſerted, generally by two tendons, into the os trapezium, and upper back-part of the metacarpal bone of the thumb, and often joins with the abductor pollicis.

Uſe.

Uſe. To extend the metacarpal bone of the thumb outwardly.

Abductor longus pollicis manus, Albinus.

Extenſor primi internodii, Douglas.

2. EXTENSOR PRIMI INTERNODII,

Ariſes, fleſhy, from the poſterior part of the ulna near the former muſcle, and from the interoſſeous ligament.

Inſerted, tendinous, into the poſterior part of the firſt bone of the thumb; and part of it may be traced as far as the ſecond bone.

Uſe. To extend the firſt bone of the thumb obliquely outwards.

Extenſor minor pollicis manus, Albinus.

This and the preceding muſcle is called

Extenſor pollicis primus, Winſlow.

Extenſor ſecundi internodii, Douglas.

3. EXTENSOR SECUNDI INTERNODII,

Ariſes, by an acute, tendinous, and fleſhy be-

beginning, from the middle back part of the ulna, and from the interoſſeous ligament; its tendon runs through a ſmall groove at the inner and back part of the lower end of the radius.

Inſerted into the laſt bone of the thumb.

Uſe. To extend the laſt joint of the thumb obliquely backwards.

Extenſor major pollicis manus, Albinus.

Extenſor pollicis ſecundus, Winſlow.

Extenſor tertii internodii, Douglas.

ABDUCTOR POLLICIS MANUS,

Ariſes, by a broad, tendinous, and fleſhy beginning, from the ligamentum carpi annulare, and from the os trapezium.

Inſerted, tendinous, into the outer ſide of the root of the firſt bone of the thumb.

Uſe. To draw the thumb from the fingers.

N. B. Albinus names the inner portion of this muſcle *abductor brevis alter*.

Abductor, Thenar Riolani, Douglas.

AD-

ADDUCTOR POLLICIS MANUS,

Ariſes, fleſhy, from almoſt the whole length of the metacarpal bone that ſuſtains the middle finger; from thence its fibres are collected together.

Inſerted, tendinous, into the inner part of the root of the firſt bone.

Uſe. To pull the thumb towards the fingers.

Adductor ad minimum digitum, Douglas.

Fore-finger,

INDICATOR,

Ariſes, by an acute fleſhy beginning, from the middle of the poſterior part of the ulna; its tendon paſſes under the ſame ligament with the extenſor digitorum communis, with part of which it is

In-

Inſerted into the poſterior part of the fore-finger.

Extenſor ſecundi internodii indicis proprius, vulgo Indicator, Douglas.

ABDUCTOR INDICIS MANUS,

Ariſes, from the os trapezium, and from the ſuperior part and inner ſide of the meta-carpal bone of the thumb.

Inſerted, by a ſhort tendon, into the outer and back part of the firſt bone of the fore-finger.

Uſe. To bring the fore-finger towards the thumb.

Semi-interoſſeus, Winſlow.

Little-finger,

ABDUCTOR MINIMI DIGITI MANUS,

Ariſes, fleſhy, from the os piſiforme, and from that part of the ligamentum carpi annulare next it.

In-

Inſerted, tendinous, into the inner ſide of the upper end of the firſt bone of the little finger.

Uſe. To draw this finger from the reſt.

Hypothenar minor, Winſlow.

Extenſor tertii internodii minimi digiti, Douglas.

ADDUCTOR METACARPI MINIMI DIGITI MANUS,

Ariſes, fleſhy, from the thin edge of the os unciforme, and from that part of the ligament of the wriſt next it.

Inſerted, tendinous, into the inner ſide and anterior part of the metacarpal bone of this finger.

Uſe. To bend and bring the metacarpal bone of this finger towards the reſt.

Metacarpus, Winſlow.

Flexor primi internodii minimi digiti, Douglas.

FLEXOR

FLEXOR PARVUS MINIMI DIGITI.

Ariſes, fleſhy, from the outer ſide of the os unciforme, and from the ligament of the wriſt which joins with that bone.

Inſerted, by a roundiſh tendon, into the inner and anterior part of the upper end of the firſt bone of this finger.

Uſe. To bend the little finger, and aſſiſt the adductor.

Abductor minimi digiti, Hypothenar Riolani, Douglas.

Between the metacarpal bones, there are *four internal* and *three external* muſcles, named *interoſſei*.

Interoſſei interni:

1. PRIOR INDICIS,

Ariſes, tendinous and fleſhy, from the upper and outer part of the metacarpal bone that ſuſtains the fore-finger.

In-

Inſerted into the outſide of that part of the tendinous expanſion from the extenſor digitorum communis, which covers the poſterior part of the fore-finger.

Uſe. To draw the fore-finger inwards towards the thumb, and extend it obliquely.

Extenſor tertii internodii indicis, Douglas.

2. POSTERIOR INDICIS,

Ariſes, tendinous and fleſhy, from the root and inner part of the metacarpal bone that ſuſtains the fore-finger.

Inſerted into the inner ſide of the tendinous expanſion which is ſent off from the extenſor digitorum communis, along the poſterior part of the fore-finger.

Uſe. To extend the fore-finger obliquely, and to draw it outwards.

Firſt interoſſeus, Douglas.

3. PRIOR

3. PRIOR ANNULARIS.

Ariſes, from the root of the outſide of the metacarpal bone that ſuſtains the ring-finger.

Inſerted into the outſide of the tendinous expanſion of the extenſor digitorum communis which covers the ring-finger.

Uſe. To extend and pull the ring-finger towards the thumb.

Fourth interoſſeus, Douglas.

4. INTEROSSEUS AURICULARIS,

Ariſes from the root and outer ſide of the metacarpal bone of the little finger; and is

Inſerted into the outſide of the tendinous expanſion of the extenſor digitorum communis, which covers the poſterior part of the little finger.

Uſe.

Uſe. To extend and draw the little finger outwards.

Sixth interoſſeus, Douglas.

Interoſſei externi, ſeu bicipites:

1. PRIOR MEDII,

Ariſes, by two origins, from the roots of the metacarpal bones that ſuſtain the fore and middle fingers externally, and next each other: Runs along the outſide of the middle-finger; and, being conſpicuous on both ſides of the hand, is

Inſerted into the outſide of the tendinous expanſion from the extenſor digitorum communis, which covers the poſterior part of the middle-finger.

Uſe. To extend, and to draw the middle finger inwards.

Second interoſſeus, Douglas.

2. PO-

2. POSTERIOR MEDII,

Ariſes, by two origins, from the roots of the metacarpal bones, next each other, that ſuſtain the middle and ring-fingers.

Inſerted into the inſide of the tendinous expanſion from the extenſor digitorum communis, which runs along the poſterior part of the middle-finger.

Uſe. To extend and draw the middle-finger outwards.

Third interoſſeus, Douglas.

3. POSTERIOR ANNULARIS,

Ariſes, by two origins, from the roots of the metacarpal bones that ſuſtain the ring and little fingers next each other.

Inſerted into the inſide of the tendinous expanſion of the extenſor digitorum communis, which runs along the poſterior part of the ring-finger.

Uſe

Uſe. To extend and draw the ring-finger inwards.

Fifth interoſſeus, Douglas.

N. B. The internal interoſſei are only conſpicuous on the palm of the hand; but the external are apparent on both the palm and back of the hand.

CHAP.

CHAP. XXIX.

MUSCLES *of the Inferior* EXTREMITIES.

THESE may be divided into the muſcles *ſituated* on the *outſide* of the *pelvis*, on the *thigh*, on the *leg*, and on the *foot*.

Muſcles on the outſide of the *pelvis*, which are called *muſcles of the thigh*.

Theſe are compoſed of *one layer before* and *three layers behind*.

The layer before conſiſts of five muſcles:

1. PSOAS MAGNUS.
2. ILIACUS INTERNUS.

} Theſe were formerly deſcribed.

Vid. p. 106. 107.

3. PECTINALIS,

Ariſes, broad and fleſhy, from the upper and

and anterior part of the os pubis or pectinis, immediately above the foramen thyroideum.

Inserted into the anterior and upper part of the linea aspera of the os femoris, a little below the trochanter minor, by a flat and short tendon.

Use. To bring the thigh upwards and inwards, and to give it a degree of rotation outwards.

Pectineus, Albinus.

4. TRICEPS ADDUCTOR FEMORIS,

Under this appellation are comprehended three distinct muscles.

1. ADDUCTOR LONGUS FEMORIS,

Arises, by a pretty strong roundish tendon, from the upper and anterior part of the os pubis, and ligament of its synchondrosis, on the inner-side of the pectinalis.

Inserted, tendinous, near the middle of

the posterior part of the linea aspera, being continued for some way down.

Adductor femoris primus, Douglas.

Triceps minus, Winslow.

2. ADDUCTOR BREVIS FEMORIS,

Arises, tendinous, from the os pubis near its joining with the opposite os pubis below and behind the former.

Inserted, tendinous and fleshy, into the inner and upper part of the linea aspera, from a little below the trochanter minor, to the beginning of the insertion of the adductor longus.

Adductor femoris secundus, Douglas.

Triceps secundus, Winslow.

3. ADDUCTOR MAGNUS FEMORIS,

Arises, a little lower down than the former, near the symphysis of the ossa pubis; tendinous and fleshy, from the tuberosity of the

the os iſchium; the fibres run outwards and downwards.

Inſerted, into almoſt the whole length of the linea aſpera; into a ridge above the internal condyle of the os femoris; and, by a roundiſh long tendon, into the upper part of that condyle, a little above which the femoral artery takes a ſpinal turn towards the ham, paſſing between this muſcle and the bone.

Uſe of theſe three muſcles or triceps. To bring the thigh inwards and upwards, according to the different directions of their fibres; and, in ſome degree, to roll the thigh outwards.

Adductor femoris tertius, and
Adductor femoris quartus, Douglas.
Triceps tertius, Winſlow.

5. OBTURATOR EXTERNUS,

Ariſes, fleſhy, from the lower fore-part of the os pubis, and fore part of the inner

crus of the iſchium; ſurrounds the foramen thyroideum; a number of its fibres, ariſing from the membrane which fills up that foramen, are collected like rays towards a centre, and paſs outwards around the root of the back-part of the cervix of the os femoris.

Inſerted, by a ſtrong tendon, into the cavity at the inner and back part of the root of the trochanter major, adhering in its courſe to the capſular ligament of the thigh-bone.

Uſe. To roll the thigh-bone obliquely outwards, and to prevent the capſular ligament from being pinched.

Behind:

Firſt Layer.

GLUTEUS MAXIMUS,

Ariſes, fleſhy, from the poſterior part of the ſpine of the os ilium, a little higher up than the joining of the ilium with the os ſacrum, from the whole external ſide of the os ſa-

ſacrum, below the poſterior ſpinous proceſs of the os ilium; from the poſterior ſacro-iſchiatic ligament, over which part of the inferior edge of this muſcle hangs in a folded manner; from the os coccygis. All the fleſhy fibres run obliquely forwards, and a little downwards, to form a thick broad muſcle, which is divided into a number of ſtrong faſciculi. The upper part of it covers almoſt the whole of the trochanter major, between which and the tendon of this muſcle there is a large burſa mucoſa, and where it is inſeparably joined to the broad tendon of the *tenſor vaginæ femoris*.

Inſerted, by a ſtrong, thick, and broad tendon into the upper and outer part of the linea aſpera, which is continued from the trochanter major, for ſome way downwards.

Uſe. To extend the thigh, by pulling it directly backwards, and a little outwards.

Gluteus magnus, Albinus.

Gluteus major, Cowper.

Second Layer.

GLUTEUS MEDIUS,

Ariſes, fleſhy, from the anterior ſuperior ſpinous proceſs of the os ilium, and from all the outer edge of the ſpine of the ilium, except its poſterior part, where it ariſes from the dorſum of that bone.

Inſerted, by a broad tendon, into the outer and poſterior part of the trochanter major.

Uſe. To draw the thigh-bone outwards, and a little backwards; to roll the thigh-bone outwards, eſpecially when it is bended.

N. B. The anterior and upper part of this muſcle is covered by a tendinous membrane, from which a number of its fleſhy fibres ariſe, and which joins with the broad tendons of the gluteus maximus, tenſor vaginæ femoris, and latiſſimus dorſi.

Third

Third Layer conſiſts of four muſcles.

1. GLUTEUS MINIMUS,

Ariſes, fleſhy, from a ridge that is continued from the ſuperior anterior ſpinous proceſs of the os ilium, and from the middle of the dorſum of that bone, as far back as its great nitch.

Inſerted, by a ſtrong tendon, into the fore and upper part of the trochanter major.

Uſe. To aſſiſt the former in pulling the thigh outwards and backwards, and in rolling it.

Gluteus minor, Albinus.

2. PYRIFORMIS,

Ariſes, within the pelvis, by three tendinous and fleſhy origins, from the ſecond, third, and fourth pieces of the os ſacrum; from thence growing gradually narrower, it paſſes out of the pelvis along with the poſterior crural nerve, below the nitch in the

posterior part of the os ilium, where it receives a few fleshy fibres.

Inserted, by a roundish tendon, into the upper part of the cavity at the inner side of the root of the trochanter major.

Use. To move the thigh a little upwards, and roll it outwards.

Pyriformis, seu *iliacus externus*, Douglas.

3. GEMINI.

Arises, by two distinct origins; the superior from the spinous process, and the inferior from the tuberosity of the os ischium; also, from the posterior sacro-ischiatic ligament. They are both united by a tendinous and fleshy membrane, and form a purse for the tendon of the obturator internus muscle, which was formerly described.

Inserted, tendinous and fleshy, into the cavity at the inner side of the root of the trochanter major, on each side of the tendon of the obturator internus, to which they firmly adhere.

Use.

Uſe. To roll the thigh outwards, and to preſerve the tendon of the obturator internus from being hurt by the hardneſs of that part of the iſchium over which it paſſes; alſo, to hinder it from ſtarting out of its place, while the muſcle is in action.

Gemelli, Winſlow.

4. QUADRATUS FEMORIS,

Ariſes, tendinous and fleſhy, from the outſide of the tuberoſity of the os iſchium; and, running tranſverſely, is

Inſerted, fleſhy, into a rough ridge, continued from the root of the large trochanter to the root of the ſmall one.

Uſe. To roll the thigh outwards.

CHAP. XXX.

MUSCLES *ſituated on the* THIGH.

THESE are called *muſcles* of the *leg;* and conſiſt of *one*, on the *outſide; two*, on the *inſide; four*, *before;* and, *four behind.*

Previous to the deſcription of the muſcles that are ſituated on the thigh and leg, it is neceſſary to take notice of a broad tendinous faſcia or ſheath, which is ſent off from the back and from the tendons of the glutei and adjacent muſcles.

It is a ſtrong thick membrane on the outſide of the thigh and leg; but, towards the inſide of both, it gradually turns thinner, and has rather the appearance of cellular ſubſtance, than a tendinous membrane. A little below the trochanter major, it is firmly

fixed

fixed to the linea aſpera; and, farther down, to that part of the head of the tibia that is next the fibula; where it ſends off the tendinous expanſion along the outſide of the leg.

It ſerves to ſtrengthen the action of the muſcles, by keeping them firm in their proper places while in action, particularly the tendons that paſs over the joints, where this membrane is thickeſt, and it gives origin to a number of the fleſhy fibres of the muſcles.

Outſide,

TENSOR VAGINÆ FEMORIS,

Ariſes, by a narrow, tendinous, and fleſhy beginning, from the external part of the anterior ſuperior ſpinous proceſs of the os ilium.

Inſerted, a little below the trochanter major, into the inner ſide of the membranous faſcia which covers the outſide of the thigh.

Uſe. To ſtretch the membranous faſcia, to aſſiſt

assist in the abduction of the thigh, and somewhat in its rotation inwards.

Musculus aponeurosis, vel *Fasciæ latæ*, Winslow.

Inside,

1. SARTORIUS,

Arises, tendinous, from the anterior superior spinous process of the os ilium, soon grows fleshy, runs down for some space upon the rectus, and, going obliquely inwards, it passes over the vastus internus, and, about the middle of the os femoris, over part of the triceps, it runs down further between the tendon of the adductor magnus, and that of the gracilis muscle.

Inserted, by a broad and thin tendon, into the inner side of the tibia, near the inferior part of its tubercle.

Use. To bend the leg obliquely inwards, or to bring one leg across the other.

2. GRACILIS,

Arises, by a thin tendon, from the os pubis

bis near the ſymphyſis of theſe two bones; ſoon grows fleſhy; and, deſcending by the inſide of the thigh, is

Inſerted, tendinous, into the tibia under the ſartorius.

Uſe. To aſſiſt the ſartorius.

Gracilis internus, ſive *Rectus internus*, Winſlow.

Before,

1. RECTUS.

Ariſes, fleſhy, from the inferior anterior ſpinous proceſs of the os ilium, and tendinous from the dorſum of the ilium, a little above the acetabulum; runs down over the anterior part of the cervix of the os femoris, the fibres not being ſtraight, but running down like the plumage of a feather obliquely outwards and inwards, from a tendon in the middle.

Inſerted, tendinous, into the upper part of the patella, from which a thin tendon runs down, on the fore-part of this bone, to ter-

terminate in a thick ſtrong ligament, which is ſent off from the inferior part of the patella, and inſerted into the tubercle of the tibia.

Uſe. To extend the leg, and in a powerful manner, by the intervention of the patella, like a pulley.

Rectus, ſive *Gracilis anterior*, Winſlow.

2. VASTUS EXTERNUS,

Ariſes, broad, tendinous, and fleſhy, from the root of the trochanter major, and upper part of the linea aſpera, its origin being continued from near the inſertion of the gluteus minimus, the whole length of the linea aſpera, by fleſhy fibres which run obliquely forwards to a middle tendon, where they terminate.

Inſerted into a large ſhare of the upper part of the patella; and part of it ends in an aponeuroſis, which is continued down to the leg, and, in its paſſage, is firmly fixed to the head of the tibia.

Uſe.

Uſe. To extend the leg.

3. VASTUS INTERNUS,

Ariſes, tendinous and fleſhy, from between the fore-part of the os femoris and root of the trochanter minor, and from almoſt all the inſide of the linea aſpera, by fibres running obliquely forwards and downwards.

Inſerted, tendinous, into the upper and inſide of the patella, continuing fleſhy lower than the vaſtus externus. Part of it likewiſe ends in an aponeuroſis continued down to the leg, and fixed in its paſſage to the upper part of the tibia.

Uſe. To extend the leg.

4. CRURALIS,

Ariſes, fleſhy, from between the two trochanters of the os femoris, but nearer the minor, and firmly adhering to moſt of the fore-

fore-part of the os femoris, and connected to both vasti muscles.

Inserted, tendinous, into the upper part of the patella, behind the rectus.

Use. To assist in the extension of the leg.

Cruralis, Albinus.

N. B. These four muscles *before*, being inserted into the patella, have the same effect upon the leg, as if they were immediately inserted into it, by means of the strong tendon, or rather ligament, which is sent off from the inferior part of the patella to the tibia.

Behind,

1. SEMITENDINOSUS.

Arises, tendinous and fleshy, in common with the long head of the biceps, from the posterior part of the tuberosity of the os ischium; and sending down a long roundish tendon, which ends flat, is

Inserted into the inside of the ridge of the tibia, a little below its tubercle.

Use.

Uſe. To bend the leg backwards, and a little inwards.

Seminervoſus, Winſlow and Douglas.

2. SEMIMEMBRANOSUS,

Ariſes, tendinous, from the upper and poſterior part of the tuberoſity of the os iſchium, ſends down a broad flat tendon, which ends in a fleſhy belly, and, in its deſcent, runs at firſt on the fore-part of the biceps, and, lower, between it and the ſemitendinoſus.

Inſerted, tendinous, into the inner and back part of the head of the tibia.

Uſe. To bend the leg, and bring it directly backwards.

N. B. The two laſt form what is called the *inner ham-ſtring*.

3. BICEPS FLEXOR CRURIS,

Ariſes, by two diſtinct heads. The firſt, called

called *longus*, ariſes, in common with the ſemitendinoſus, from the upper and poſterior part of the tuberoſity of the os iſchium. The ſecond, called *brevis*, ariſes from the linea aſpera, a little below the termination of the gluteus maximus, by a fleſhy acute beginning, which ſoon grows broader as it deſcends to join with the firſt head, a little above the external condyle of the os femoris.

Inſerted by a ſtrong tendon, into the upper part of the head of the fibula.

Uſe. To bend the leg.

Biceps cruris, Albinus.

Biceps, Winſlow and Douglas.

N. B. This muſcle forms what is called the *outer ham-ſtring;* and between it and the inner, the nervous popliteus, and arteria and vena poplitea, are ſituated.

4. POPLITEUS,

Ariſes, by a round tendon, from the lower

and

and back-part of the external condyle of the os femoris; then runs over the ligament that involves the joint, firmly adhering to it, and part of the ſemilunar cartilage. As it runs over the joint, it becomes fleſhy, and the fibres run obliquely inwards, being covered with a thin tendinous membrane.

Inſerted, broad, thin, and fleſhy, into a ridge at the upper and internal edge of the tibia, a little below its head.

Uſe. To aſſiſt in bending the leg, and to prevent the capſular ligament from being pinched. After the leg is bent, this muſcle ſerves to roll it inwards.

CHAP.

CHAP. XXXI.

MUSCLES *ſituated on the* LEG.

THESE are called *Muſcles* of the *Foot*; and may be divided into *two claſſes*, viz. *Extenſors and Flexors* of the *Foot*. 2. *Common Extenſors* and *Flexors* of the *Toes*.

Firſt Claſs.

Extenſors.

Theſe conſiſt of three:

1. GASTROCNEMIUS EXTERNUS, SEU GEMELLUS,

Ariſes, by two diſtinct heads. The firſt head ariſes from the upper and back-part of the internal condyle of the os femoris, and from that bone, a little above its condyle, by two diſtinct tendinous origins. The ſecond

cond head ariſes tendinous from the upper and back-part of the external condyle of the os femoris. A little below the joint, their fleſhy bellies unite in a middle tendon; and, below the middle of the tibia, it ſends off a broad thin tendon, which joins a little above the extremity of the tibia with the tendon of the following.

2. SOLEUS, SEU GASTROCNEMIUS INTERNUS,

Ariſes by two origins. The firſt is from the upper and back part of the head of the fibula, continuing to receive many of its fleſhy fibres from the poſterior part of that bone for ſome ſpace below its head. The other origin begins from the poſterior and upper part of the middle of the tibia; and runs inwards along the inferior edge of the popliteus towards the inner part of the tibia, from which it receives fleſhy fibres for ſome way down. The fleſh of this muſcle,

co-

covered by the tendon of the gemellus, runs down near as far as the extremity of the tibia; a little above which the tendons of both gaſtrocnemii unite, and form a ſtrong round chord, which is called *tendo Achillis*.

Inſerted into the upper and poſterior part of the os calcis; by the projection of which the tendo Achillis is at a conſiderable diſtance from the tibia.

Uſe. To extend the foot, by bringing it backwards and downwards.

Gemellus and *Soleus*, Albinus.

Gaſtrocnemii and *Soleus*, Winſlow.

Extenſor tarſi ſuralis, vel *Extenſor magnus*, Douglas.

3. PLANTARIS,

Ariſes, thin and fleſhy, from the upper and back-part of the root of the external condyle of the os femoris, near the inferior extremity of that bone, adhering to the ligament that involves the joint in its deſcent.

It

It passes along the second origin of the soleus, and under the gemellus, where it sends off a long, slender, thin tendon, which comes from between the great extensors, where they join tendons; then runs down by the inside of the tendo Achilles.

Inserted into the inside of the posterior part of the os calcis, below the tendo Achillis.

Use. To assist the former, and to pull the capsular ligament of the knee from between the bones. It seems likewise to assist in rolling the foot inwards.

Tibialis gracilis, vulgo *Plantaris*, Winslow.

Extensor tarsi minor, vulgo *Plantaris*, Douglas.

N. B. This muscle, though seldom, has been found wanting on both sides.

Flexors:

These consist of four; two that belong to the tibia, and two to the fibula.

1. TI-

1. TIBIALIS ANTICUS,

Ariſes, tendinous and fleſhy, from the middle of that proceſs of the tibia, to which the fibula is connected above; then it runs down fleſhy on the outſide of the tibia; from which, and the upper-part of the interoſſeous ligament, it receives a number of diſtinct fleſhy fibres; near the extremity of the tibia, it ſends off a ſtrong round tendon, which paſſes under part of the ligamentum tarſi annulare near the malleolus internus.

Inſerted, tendinous, into the inſide of the os cuneiforme internum, and poſterior end of the metatarſal bone that ſuſtains the great toe.

Uſe. To bend the foot, by drawing it upwards, and, at the ſame time, to turn the toes inwards.

2. TI-

2. TIBIALIS POSTICUS,

Ariſes, by a narrow fleſhy beginning, from the fore and upper part of the tibia, juſt under the proceſs which joins it to the fibula; then paſſing through a perforation in the upper part of the interoſſeus ligament, it continues its origin from the back-part of the fibula next the tibia, and from near one half of the upper-part of the laſt-named bone; as alſo, from the interoſſeous ligament, the fibres running towards a middle tendon, which ſends off a round one that paſſes in a groove behind the malleolus internus.

Inſerted, tendinous, into the upper and inner part of the os naviculare, being further continued to the os cuneiforme internum and medium; beſides, it gives ſome tendinous filaments to the os calcis, os cuboides, and to the root of the metatarſal bone that ſuſtains the middle toe.

Uſe. To extend the foot, and to turn the toes inwards.

3. PERONEUS LONGUS,

Ariſes, tendinous and fleſhy, from the fore-part of the head of the perone, or fibula, the fibres running ſtraight down; alſo from the upper and external part of the fibula, where it begins to riſe into a round edge; as alſo, from the hollow between that and its anterior edge, as far down as to reach within a handbreadth of the ankle, by a number of fleſhy fibres, which run outwards towards a tendon, that ſends off a long round one, which paſſes through a channel at the outer ankle, in the back-part of the inferior extremity of the fibula; then, being reflected to the ſinuoſity of the os calcis, it runs along a groove in the os cuboides, above the muſcles in the ſole of the foot.

Inſerted, tendinous, into the outſide of the

the root of the metatarſal bone that ſuſtains the great toe, and by ſome tendinous fibres in the os cuneiforme internum.

Uſe. To move the foot outwards, and to extend it a little.

Peroneus maximus, vulgo *Peroneus poſterior*, Winſlow.

Peroneus primus, ſeu *Poſticus*, Douglas.

4. PERONEUS BREVIS,

Ariſes, by an acute fleſhy beginning, from above the middle of the external part of the fibula; from the outer ſide of the anterior ſpine of this bone; as alſo, from its round edge externally, the fibres running obliquely outwards towards a tendon on its external ſide: it ſends off a round tendon which paſſes through the groove at the outer ankle, being there included under the ſame ligament with that of the preceding muſcle; and a little further, it runs through a particular one of its own.

Inſerted, tendinous, into the root and external part of the metatarſal bone that ſuſtains the little toe.

Uſe. To aſſiſt the former in pulling the foot outwards, and extending it a little.

Peroneus medius, vulgo *Peroneus anticus*, Winſlow.

Peroneus ſecundus, ſeu *Anticus*, Douglas.

Second Claſs.

Common Extenſors.

Theſe conſiſt of two.

1. EXTENSOR LONGUS DIGITORUM PEDIS,

Ariſes, tendinous and fleſhy, from the upper and outer part of the head of the tibia, and from the head of the fibula where it joins with the tibia, and from the interoſſeous ligament; alſo from the tendinous faſcia, which covers the upper and outſide of the leg by a number of fleſhy fibres; and ten-

tendinous and fleſhy, from the anterior ſpine of the fibula, almoſt its whole length, where it is inſeparable from the *peroneus tertius*. It ſplits into four round tendons, under the ligamentum tarſi annulare.

Inſerted, by a flat tendon, into the root of the firſt joint of each of the four ſmall toes; and is expanded over the upper-ſide of the toes, as far as the root of the laſt joint.

Uſe. To extend all the joints of the four ſmall toes.

Extenſor longus, Douglas.

N. B. A portion of this muſcle, which

Ariſes from the middle of the fibula, continues down to near its inferior extremity, and ſends its fleſhy fibres forwards to a tendon, which paſſes under the annular ligament, and is

Inſerted into the root of the metatarſal bone that ſuſtains the little toe: it is called by Albinus, *Peroneus tertius*; and by others, the *Nonus Veſalii*.

Uſe. To aſſiſt in bending the foot.

2. EXTENSOR BREVIS DIGITORUM PEDIS,

Ariſes, fleſhy and tendinous, from the fore and upper part of the os calcis; and ſoon forms a fleſhy belly, diviſible into four portions, which ſends off an equal number of tendons that paſs over the upper part of the foot, under the tendons of the former.

Inſerted, by four ſlender tendons, into the tendinous expanſion from the extenſor longus, which covers the ſmall toes, except the little one; alſo into the tendinous expanſion from the extenſor pollicis, that covers the upper part of the great toe.

Uſe. To extend the toes.

Extenſor brevis, Douglas.

Flexors:

Theſe may be reckoned three.

1. FLEXOR BREVIS DIGITORUM PEDIS, PERFORATUS, SUBLIMIS,

Ariſes, by a narrow fleſhy beginning, from

from the inferior and poſterior part of a protuberance of the os calcis, between the abductors of the great and little toes; and ſoon forms a thick fleſhy belly, which ſends off four tendons that ſplit for the paſſage of the flexor longus.

Inſerted into the ſecond phalanx of the four leſſer toes. The tendon of the little toe is often wanting.

Uſe. To bend the ſecond joint of the toes.

Perforatus, ſeu *Sublimis*, Douglas.

2. FLEXOR LONGUS DIGITORUM PEDIS, PROFUNDUS, PERFORANS,

Ariſes, by an acute tendon, which ſoon becomes fleſhy, from the back part of the tibia, ſome way below its head, near the entry of the medullary artery; which beginning, is continued down the inner edge of this bone by ſhort fleſhy fibres, ending in its tendon; alſo, by tendinous and fleſhy fibres, from the outer edge of the tibia;

and between this double order of fibres the tibialis poſticus muſcle lies incloſed. Having paſſed under two annular ligaments, it then paſſes through a ſinuoſity at the inſide of the os calcis; and, about the middle of the ſole of the foot, divides into four tendons, which paſs through the ſlits of the perforatus; and, juſt before its diviſion, it receives a conſiderable tendon from that of the flexor pollicis longus.

Inſerted into the extremity of the laſt joint of the four leſſer toes.

Uſe. To bend the laſt joint of the toes.

This muſcle is aſſiſted by the

FLEXOR DIGITORUM ACCESSORIUS, SEU MASSA CARNEA JACOBI SYLVII,

Ariſes, by a thin fleſhy origin, from moſt part of the ſinuoſity at the inſide of the os calcis, which is continued forwards for ſome ſpace on the ſame bone; alſo, by a thin tendinous beginning, from before the tuberoſity

roſity of the os calcis externally; and, ſoon becoming all fleſhy, is

Inſerted into the tendon of the flexor longus, juſt at its diviſion into four tendons.

Uſe. To aſſiſt the flexor longus.

3. LUMBRICALES PEDIS.

Ariſe, by four tendinous and fleſhy beginnings, from the tendon of the flexor profundus, juſt before its diviſion, near the inſertion of the maſſa carnea.

Inſerted, by four ſlender tendons, into the inſide of the firſt joint of the four leſſer toes, and are loſt in the tendinous expanſion that is ſent from the extenſors to cover the upper part of the toes.

Uſe. To increaſe the flexion of the toes, and to draw them inwards.

CHAP. XXXII.

MUSCLES *which are chiefly ſituated on the* FOOT.

THESE may be divided into the *muſcles* of the *great toe*, of the *little toe*, and of the *metatarſal bones*.

Muſcles of the great toe.

Theſe are five:

1. EXTENSOR PROPRIUS POLLICIS PEDIS,

Ariſes, by an acute, tendinous, and fleſhy beginning, ſome way below the head and anterior part of the fibula, along which it runs to near its lower extremity, connected to it by a number of fleſhy fibres, which deſcend obliquely towards a tendon.

In-

Inſerted, tendinous, into the poſterior part of the firſt and laſt joint of the great toe.

Uſe. To extend the great toe.

Extenſor longus, Douglas.

2. FLEXOR LONGUS POLLICIS PEDIS.

Ariſes, by an acute, tendinous, and fleſhy beginning, from the poſterior part of the fibula, ſome way below its head, being continued down the ſame bone, almoſt to its inferior extremity, by a double order of oblique fleſhy fibres; its tendon paſſes under an annular ligament at the inner ankle.

Inſerted into the laſt joint of the great toe, and generally ſends a ſmall tendon to the os calcis.

Uſe. To bend the laſt joint of this toe.

Flexor longus, Douglas.

3. FLEXOR BREVIS POLLICIS PEDIS,

Ariſes, tendinous, from the under and fore-part of the os calcis, where it joins with the os cuboides, from the os cuneiforme externum, and is inſeparably united with the abductor and adductor pollicis.

Inſerted into the external os ſeſamoideum and root of the firſt joint of the great toe.

Uſe. To bend the firſt joint.

4. ABDUCTOR POLLICIS PEDIS,

Ariſes, fleſhy, from the inſide of the root of the protuberance of the os calcis, where it forms the heel; and tendinous from the ſame bone, where it joins with the os naviculare.

Inſerted, tendinous, into the internal os ſeſamoideum, and root of the firſt joint of the great toe.

Uſe.

Uſe. To pull the great toe from the reſt.

Thenar, Winſlow.

5. ADDUCTOR POLLICIS PEDIS,

Ariſes, by a long thin tendon, from the os calcis, from the os cuboides, from the os cuneiforme externum, and from the root of the metatarſal bone of the ſecond toe.

Inſerted into the external os ſeſamoideum, and root of the metatarſal bone of the great toe.

Uſe. To bring this toe nearer the reſt.

Antithenar, Winſlow.

Muſcles of the little toe.

Theſe, beſides the common extenſors and flexors, are two, viz.

1. ABDUCTOR MINIMI DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the ſemicircular edge of a cavity on the inferior part of the protuberance of the os calcis, and

and from the root of the metatarsal bone of the little toe.

Inserted into the root of the first joint of the little toe externally.

Uses. To draw the little toe outwards from the rest.

Parathenar major, and *Metatarseus*, Winslow.

2. FLEXOR BREVIS MINIMI DIGITI PEDIS,

Arises, tendinous, from the os cuboides, near the sulcus or furrow for lodging the tendon of the peroneus longus; fleshy from the outside of the metatarsal bone that sustains this toe, below its protuberant part.

Inserted into the anterior extremity of the metatarsal bone, and root of the first joint of this toe.

Use. To bend this toe.

Parathenar minor, Winslow.

Muscles

Muſcles from the metatarſal bones.

Theſe are four external and three internal interoſſei, and one muſcle which is common to all the metatarſal bones.

Interoſſei Pedis externi, Bicipites.

1. ABDUCTOR INDICIS PEDIS,

Ariſes, tendinous and fleſhy, by two origins, from the root of the inſide of the metatarſal bone of the fore-toe, from the outſide of the root of the metatarſal bone of the great-toe, and from the os cuneiforme internum.

Inſerted, tendinous, into the inſide of the root of the firſt joint of the fore-toe.

Uſe, To pull the fore-toe inwards from the reſt of the ſmall toes.

2. ADDUCTOR INDICIS PEDIS,

Ariſes, tendinous and fleſhy, from the roots

roots of the metatarſal bones of the fore and ſecond toe.

Inſerted, tendinous, into the outſide of the root of the firſt joint of the fore-toe.

Uſe. To pull the fore-toe outwards towards the reſt.

3. ADDUCTOR MEDII DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the roots of the metatarſal bones of the ſecond and third toes.

Inſerted, tendinous, into the outſide of the root of the firſt joint of the ſecond toe.

Uſe. To pull the ſecond toe outwards.

4. ADDUCTOR TERTII DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the roots of the metatarſal bones of the third and little toe.

Inſerted, tendinous, into the outſide of the root of the firſt joint of the third toe.

Uſe

Uſe. To pull the third toe outwards.

Interoſſei Pedis interni.

1. ABDUCTOR MEDII DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the inſide of the root of the metatarſal bone of the middle toe internally.

Inſerted, tendinous, into the inſide of the root of the firſt joint of the middle toe.

Uſe. To pull the middle toe inwards.

2. ABDUCTOR TERTII DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the inſide and inferior part of the root of the metatarſal bone of the third toe.

Inſerted, tendinous, into the inſide of the root of the firſt joint of the third toe.

Uſe. To pull the third toe inwards.

3. ADDUCTOR MINIMI DIGITI PEDIS,

Ariſes, tendinous and fleſhy, from the inſide

ſide of the root of the metatarſal bone of the little toe.

Inſerted, tendinous, into the inſide of the root of the firſt joint of the little toe.

Uſe. To pull the little toe inwards.

The muſcle which brings the extremities of the metatarſal bones towards each other, is named

TRANSVERSALIS PEDIS.

Ariſes, tendinous, from the under part of the anterior extremity of the metatarſal bone of the great toe, and from the internal os ſeſamoideum of the firſt joint, adhering to the adductor pollicis.

Inſerted, tendinous, into the under and outer part of the anterior extremity of the metatarſal bone of the little toe, and ligament of the next toe.

Uſe. To contract the foot, by bringing the great toe and the two outermoſt toes nearer each other.

N. B.

N. B. The muſcles ſituated on the ſole of the foot are covered by a ſtrong tendinous aponeuroſis, which is extended from the os calcis to the firſt joints of all the toes, and ſerves to preſerve the ſubjacent parts from being compreſſed in ſtanding and walking.

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